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SEVENTEENTH SERIES: No. 3—PART 3.

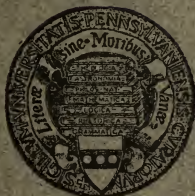
UNIVERSITY OF PENNSYLVANIA

SCHOOL OF MEDICINE

(1916-1917)

Announcement for the 152nd Annual Session

1917-1918



Founded 1740

PHILADELPHIA
PUBLISHED BY THE UNIVERSITY
BI-MONTHLY
FEBRUARY, 1917

Entered at the Philadelphia, Pa., Post Office as Second-Class Matter

SPECIAL NOTICE.

Copies of the University Catalogue (containing detailed information concerning all the Schools) may be obtained ONLY upon application to the Secretary of the University, Law School Building.

To any alumnus of the University, the Catalogue will be sent upon application on receipt of name, class and address.

The special announcement of the following divisions of the University will be sent upon application to the appropriate Dean:

THE COLLEGE, including

THE SCHOOL OF ARTS.

THE SUMMER SCHOOL.

THE COLLEGE COURSES FOR TEACHERS.

THE TOWNE SCIENTIFIC SCHOOL.

THE WHARTON SCHOOL.

THE SCHOOL OF EDUCATION.

THE GRADUATE SCHOOL.

THE LAW SCHOOL.

THE SCHOOL OF MEDICINE.

THE SCHOOL OF DENTISTRY.

THE SCHOOL OF VETERINARY MEDICINE.

Bi-Monthly.

Entered at the Philadelphia, Pa., Post-Office as Second-Class Matter.

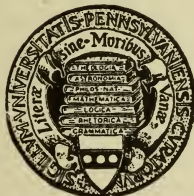
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THE UNIVERSITY.

General Information.

LOCATION.

The buildings of the University of Pennsylvania are situated in Philadelphia, on property covering an area of over fifty-nine acres. In addition to this land the University has recently acquired from the city an adjoining tract comprising fifty-five acres, more or less. The University may be reached from the various railroad stations as follows: From the West Philadelphia station of the Pennsylvania Railroad, on foot west on Woodland Avenue, a walk of less than ten minutes; from the Philadelphia and Reading Terminal station by the electric subway, west to Thirty-second Street, thence on foot west on Woodland Avenue; or from the Baltimore and Ohio Railroad Station by a walk of one square south to Walnut Street, thence by car over the bridge west to **Thirty-fourth Street.**

APPLICATIONS FOR CATALOGUES, ETC.

Applications for copies of the annual University Catalogue should be addressed to the Secretary of the University of Pennsylvania, Philadelphia, Pa.

The University also issues pamphlets relating to the College and the several Schools or to individual Departments and often containing information not found in the catalogue. Inquirers interested in special branches of work only, are advised to apply for these pamphlets, not for the Catalogue.

All letters of inquiry regarding the internal regulations and requirements in the College or each separate School of the University should be addressed to the Dean of that section (see *Administrative Officers*, following), and *not* to the Secretary of the University.

ACCOMMODATIONS FOR STUDENTS.

Lodging for students to the number of more than eight hundred is provided in the present dormitory system, which comprises an extended group of contiguous houses fronting upon three open courts. Plans of the dormitories, prices, and other details may be obtained upon application to the Bursar of the University, College Hall.

Board and lodging may be obtained also in the immediate vicinity of the University. Upon application at the offices of the Bursar, College Hall, lists of approved boarding houses may be seen.

HOUSTON HALL.

Houston Hall is the home of the Houston Club, to membership in which any member of the University is eligible. The fee for active membership in the club is \$3.00 per annum (included in the ten dollar Gymnasium and Houston Club fee paid by all male undergraduates).

Its purposes are to provide for the students a place where all may meet socially on common ground, and to furnish every available facility for healthy recreation and amusement in leisure hours. The equipment of the Hall includes a reading-room, with a large number of periodicals and newspapers; smoking-rooms, billiard and pool tables, tables for chess and checkers, a correspondence room; athletic trophy rooms; a large auditorium with grand organ; rooms for the University papers and other organizations; and other rooms for general purposes.

The Christian Association, which has its headquarters in Houston Hall, is prepared to furnish prospective students, through its Secretary, full information with regard to the various undergraduate social activities, both secular and religious.

A Students' Employment Bureau is affiliated with the Christian Association: address William F. Byron, Director, Houston Hall.

UNIVERSITY OF PENNSYLVANIA.

CHRONOLOGICAL TABLE.

- 1740—"Charity School" founded.
1749—The "Academy" established, with which the Charity School was combined.
1753—Charter granted by Thomas and Richard Penn, incorporating "The Academy and Charitable School."
1755—"Confirmatory Charter" granted by Thomas and Richard Penn, incorporating "The College, Academy and Charitable School."
1765—School of Medicine founded.
-

From September, 1777, to June, 1778, owing to the occupation of Philadelphia by British troops, recitations and lectures were suspended.

- 1779—Withdrawal of the chartered rights and privileges of The College by the State Assembly, and incorporation of the "University of the State of Pennsylvania."
1789—Restoration of its chartered rights and privileges to The College.
1790—Law School founded (re-established in 1850).
1791—Union of the University of the State of Pennsylvania with The College, under the title of the UNIVERSITY OF PENNSYLVANIA.
1874—University Hospital established.
1875—Towne Scientific School founded.
1877—Department of Music established.
1878—School of Dentistry founded.
1881—Wharton School of Finance and Commerce founded.
1882—Graduate School founded.
1884—Veterinary School founded.
1885—Veterinary Hospital established.
1885—Department of Physical Education established.
1889—Department of Archæology established.
1892—Laboratory of Hygiene established.

- 1892—Wistar Institute of Anatomy and Biology established.
- 1892—Saturday Courses for Teachers established.
- 1896—Houston Club organized.
- 1896—Flower Astronomical Observatory opened.
- 1904—Summer School (College) established.
- 1906—College Courses for Teachers established.
- 1910—Henry Phipps Institute transferred to the University.
- 1912—Division of the College into three departments—The College,
the Towne Scientific School and the Wharton School.
- 1914—School of Education established.
- 1916—Merger with Medico-Chirurgical College of Philadelphia and
establishment of the Medico-Chirurgical College Graduate
School of Medicine of the University of Pennsylvania.

ADMINISTRATIVE OFFICERS.

OF THE CORPORATION.

Provost—EDGAR F. SMITH, PH.D., Sc.D., L.H.D., LL.D.

Office in the John Harrison Laboratory of Chemistry, Thirty-fourth and Spruce Streets.

Vice-Provost—JOSIAH H. PENNIMAN, PH.D., LL.D.

Office, 104 College Hall.

Secretary—EDWARD ROBINS, A.M.

Office, 4 Law School Building.

Treasurer—WILLIAM H. HUTT, JR.

Office, 400 Chestnut Street.

Recorder—GEORGE E. NITZSCHE, LL.B.

Office, Houston Hall.

Bursar—WILLIAM O. MILLER, A.B.

Office, 102 College Hall. Office hours, 9 A. M. to 5 P. M., daily.

The Bursar's office is open from 8.45 A. M. to 5 P. M. Saturdays,

8.45 A. M. to 1 P. M.

DEANS OF THE FACULTIES.

Dean of the College Faculty—ARTHUR HOBSON QUINN, PH.D.

Office, 103 College Hall, Woodland Avenue. Office hours, 9 A. M. to 12 M., daily.

Dean of the Towne Scientific School Faculty—JOHN FRAZER, A.M., PH.D.

Office, Engineering Building. Office hours, 9 A. M. to 12 M., and 3 P. M. to 4 P. M., daily.

Dean of the Wharton School Faculty—WILLIAM McCLELLAN, E.E., PH.D.

Office, Logan Hall, Thirty-sixth Street below Woodland Avenue.

Dean of the School of Education—FRANK P. GRAVES, PH.D., LITT.D., LL.D.

Office, 108 College Hall. Office hours, 11 A. M. to 12 M., and 4 to 5 P. M. daily, except Friday and Saturday.

Dean of the Graduate School Faculty—HERMAN V. AMES, A.M., PH.D.

Office, 105 College Hall, Woodland Avenue. Office hours, 9 A. M. to 12 M., daily.

Dean of the Law Faculty—WM. E. MIKELL, B.S., LL.M.

Office in the Law School Building, Thirty-fourth and Chestnut Streets. Office hours, Wednesdays, Thursdays and Fridays, 12 to 1 P. M.; Mondays and Tuesdays, 12.15 to 1 P. M.

Dean of the Medical Faculty—WILLIAM PEPPER, A.B., M.D.

The Dean's Office (in the Medical Laboratories, Hamilton Walk) is open from 9 A. M. to 5 P. M.; Saturdays, 9 A. M. to 1 P. M.

Associate Dean—SENECA EGBERT, A.M., M.D.

Office, Seventeenth and Cherry Streets.

Dean of the Dental Faculty—EDWARD C. KIRK, D.D.S., Sc.D., LL.D.

Office, Thomas W. Evans Dental Institute, Fortieth and Spruce Streets. Office hours, 9 A. M., to 1 P. M., daily.

Dean of the Faculty of Veterinary Medicine—LOUIS A. KLEIN, V.M.D.

Office, Veterinary Building, Thirty-ninth Street and Woodland Avenue. Office open daily from 9 A. M. to 5 P. M., except Saturday; on Saturday, 9 A. M. to 1 P. M.

OF THE DEPARTMENT OF PHYSICAL EDUCATION.

Director—R. TAIT MCKENZIE, A.B., M.D.

Office in the Gymnasium, Thirty-third and Spruce Streets. Office hours, 3 P. M. to 6 P. M., daily, except Saturdays.

Students' Physicians—The Trustees have appointed DRs. GEORGE WILSON, J. C. BIRDSALL and S. HAROLD BOYD to act as students' physicians, under the guidance of DR. JOHN H. MUSSER, Physician-in-Chief of the Medical Dispensary of the University Hospital.

Ophthalmologist—WILLIAM C. POSEY, A.B., M.D., 2049 Chestnut Street.

Office hours, 8.30 A. M. to 1 P. M., daily. Telephone connection.

OF OTHER DEPARTMENTS.

Director of Admissions—GEORGE GAILEY CHAMBERS, Ph.D.

(For the College, Towne Scientific School, Wharton School and School of Education.)

Office, Room 113, College Hall.

Assistant Directors—GEORGE WILLIAM MCCLELLAND, A.M., Ph.D.,
FREDERIC W. BREIMEIER, A.M.

Librarian of the University—MORRIS JASTROW, JR., PH.D., LL.D.

Office in the Library, Thirty-fourth Street below Walnut.

Assistant Librarian—KATHARINE S. LEIPER.

The Library is open daily during term-time (except holidays) from 8.15 A. M. to 10 P. M.; Sundays from 2 P. M. to 6 P. M. During the summer vacation daily (except Sundays and holidays) from 9 A. M. to 5 P. M.; during the session of the Summer School, daily (except holidays) from 8.30 A. M. to 10 P. M.; Sundays from 2 P. M. to 6 P. M.

Librarian of the Biddle Law Library—MRS. MARGARET C. KLINGELSMITH, LL.B., LL.M.

Office in the Law School Building, Thirty-fourth and Chestnut Streets. Office hours, 10 A. M. to 5 P. M., daily.

Director of the Summer School—OWEN L. SHINN, PH.D.

Office, College Hall.

Superintendent of the University Hospital—MARION E. SMITH.

The Hospital is on Spruce Street above Thirty-fourth. Communications concerning the Hospital and the admission of patients should be addressed to the Superintendent.

Director of the William Pepper Clinical Laboratory—HERBERT FOX, M.D.

Office in the Laboratory. Office hours, 2 P. M. to 3 P. M., daily.

The Laboratory is on Spruce Street below Thirty-sixth, adjoining the Hospital.

Director of the Wistar Institute—MILTON J. GREENMAN, PH.B., M.D., Sc.D.

Office in the Institute, Thirty-sixth Street and Woodland Avenue.

Office hours, 3 to 5 P. M., daily, except Saturdays.

Director of the John Harrison Laboratory of Chemistry—EDGAR F. SMITH, PH.D., CHEM.D., Sc.D., L.H.D., LL.D.

Office in the Laboratory, Thirty-fourth and Spruce Streets.

Director of the Laboratory of Hygiene—ALEXANDER C. ABBOTT, M.D., DR.P.H., Sc.D.

Office in the Laboratory, Thirty-fourth Street below Walnut.

First Assistant in the Laboratory of Hygiene—DAVID HENDRICKS BERGEY, A.M., M.D., DR.P.H.

Office in the Laboratory. Office hours, 9 A. M. to 12 M., and 2 P. M. to 5 P. M., daily.

Director of the Randal Morgan Laboratory of Physics—ARTHUR W. GOODSPEED, PH.D.

Office in the Laboratory, Thirty-fourth Street below Walnut.

Director of the Psychological Laboratory and Clinic—LIGHTNER WITMER, PH.D.

Office in the Laboratory, College Hall.

Director of the Light and Heat Station—SAMUEL B. LOCKE.

Superintendent of Buildings and Grounds—WILLIAM R. JONES, M.E.
Office, Room 323, Engineering Building.

Director of the Zoölogical Laboratory—CLARENCE E. MCCLUNG,
PH.G., A.M., PH.D.

The Laboratory is on Hamilton Walk.

Director of the Robert Hare Chemical Laboratory—JOHN MARSHALL,
M.D., NAT.Sc.D., LL.D.

Director of the Botanic Garden—JOHN M. MACFARLANE, D.Sc.

The Garden is adjacent to the Botanical Laboratory, on Hamilton Walk, and is open daily from 7 A. M. to sunset. The greenhouses are open from 8 A. M. to 5 P. M.

Director of the Flower Astronomical Observatory—ERIC DOOLITTLE,
C.E.

The Observatory is situated at Highland Park Station, one mile beyond the Sixty-ninth Street Terminal Station of the Market Street elevated electric road.

Purchasing Agent—BOULTON EARNSHAW.

Office, Room 320, Zoölogical Laboratory. Office hours, 9 A. M. to 4.30 P. M.

HENRY PHIPPS INSTITUTE.

Executive Director—CHARLES J. HATFIELD, M.D.

Director of the Clinical and Sociological Department—H. R. M. LANDIS, M.D.

Director of the Laboratory—PAUL A. LEWIS, M.D.

UNIVERSITY MUSEUM.

The Museum contains the archæological and ethnological collections of the University, and is situated on Spruce Street below Thirty-fourth, opposite Franklin Field. The collections are open to visitors daily from 10 A. M. to 5 P. M.; on Sundays, from 2 P. M. to 6 P. M. Director, GEORGE B. GORDON, Sc.D.

UNIVERSITY OF PENNSYLVANIA CABLE ADDRESS:

"Sylpenn," Philadelphia.

GENERAL SUMMARIES.

OFFICERS OF INSTRUCTION.

The College.....	186
Towne Scientific School.....	174
Wharton School.....	71
School of Education.....	84
Graduate School.....	131
Law School.....	27
School of Medicine.....	260
" " Dentistry.....	93
" " Veterinary Medicine.....	26
Emeritus Professors.....	7
	1,059
Duplications.....	332
	727
Total.....	

STUDENTS.

The College.....	2,753
Towne Scientific School.....	830
Wharton School.....	2,825
School of Education.....	399
Graduate School.....	722
Law School.....	207
School of Medicine.....	606
" " Dentistry.....	808
Dental Graduate School.....	13
School of Veterinary Medicine.....	104
	9,267
Duplications (estimated).....	340
	8,927
Total.....	

GEOGRAPHICAL DISTRIBUTION.

The Student List (gross figures) includes 3551 from Philadelphia; 2693 from Pennsylvania, outside of Philadelphia; 552 from New York; 820 from New Jersey; 143 from Ohio; 84 from Connecticut; 80 from Massachusetts; 109 from Maryland; 68 from Delaware; 59 from District of Columbia; 19 from Alabama; 56 from Indiana; 36 from California; 46 from Illinois; 53 from Iowa; 25 from Maine; 20 from Michigan; 34 from Minnesota; 23 from Georgia; 39 from Missouri; 39 from North Carolina; 16 from Rhode Island; 22 from Tennessee; 25 from Texas; 56 from Virginia; 29 from Washington; 37 from West Virginia; 24 from Wisconsin; 25 from Kentucky; 9 from Vermont; in addition to other state returns. There are 72 from European and adjacent countries, 33 from South America, including Argentina, Brazil, Colombia, Ecuador and Peru; 8 from Australia; 16 from Canada; 13 from Central America; 38 from China; 9 from Japan, and 4 from Mexico.

SCHOOL OF MEDICINE.*

On September 28, 1917, the 152nd annual session of the School of Medicine will be opened, to continue until June 19, 1918, when the annual commencement exercises for the term will be held.

This venerable institution, the oldest Medical School in the United States, was founded in 1765 by DR. JOHN MORGAN, who filled in it the first medical professorship created in America. In his opening "Discourse upon the Institution of Medical Schools in America," delivered in the College of Philadelphia, May 30, 1765, DR. MORGAN uttered these prophetic words: "Perhaps this medical institution, the first of its kind in America, though small in its beginning, may receive a constant increase of strength, and annually exert new vigor. It may collect a number of young persons, of more than ordinary abilities, and so improve their knowledge as to spread its reputation to distant parts. By sending these abroad duly qualified, or by exciting an emulation amongst men of parts and literature, it may give birth to other useful institutions of a similar nature, or occasional rise, by its example, to numerous societies of different kinds, calculated to spread the light of knowledge through the whole American continent, wherever inhabited."

Through DR. MORGAN, the pupil of HUNTER in London and of CULLEN in Edinburgh, the graduates of this school take a just pride in regarding it as the lineal descendant of the best medical schools of Great Britain in the eighteenth century. To DR. MORGAN was soon joined another pupil of CULLEN, DR. WILLIAM SHIPPEN, as Professor of Anatomy and Surgery, thus forming another tie of relationship to the celebrated University of Edinburgh, methods of instruction in which were substantially adopted here. In the next year DR. ADAM KUHN was added as Professor of Botany and Materia Medica; and on June 21, 1768, a Commencement was held at which medical honors were bestowed, the first in point of time in America. In 1769, DR. BENJAMIN RUSH was elected to the Professorship of Chemistry, while DR. THOMAS BOND, one of the trustees of the College of Philadelphia, delivered lectures on Clinical Medicine in the Pennsylvania Hospital.

To the faculty thus composed of MORGAN, SHIPPEN, KUHN and RUSH have succeeded, at various times, professors whose reputations have been national, as WOODHOUSE, BARTON, WISTAR, CHAPMAN,

* The authorities of the school reserve the right to make such modifications in connection with the announcements embodied in this catalogue as may from time to time be required or deemed wise without the formality of further notice.

PHYSICK, DEWEES, HORNER, HARE, GEORGE B. WOOD, HODGE, FRANCIS GURNEY SMITH, HENRY H. SMITH, LEIDY, AGNEW, GOODELL, PEPPER, STILLÉ, R. A. F. PENROSE, H. C. WOOD, ASHHURST, NORRIS, TYSON, DUHRING and WHITE.

The Medical School has been housed during the past century and a half in various buildings, the first, known as Anatomical or Surgeon's Hall, was located on Fifth Street above Walnut. Later the University having purchased in 1802 the house erected for George Washington on Ninth Street, where the present United States Post Office is located, the Medical School occupied an addition to the building. This in 1818 was rebuilt and considerably enlarged. In 1829 the "Presidential Mansion" was torn down and two buildings were erected—one for the College and the other for the Medical School. In 1873 the University moved to its present location in West Philadelphia adjoining the grounds of the Philadelphia General Hospital or Blockley. Medical Hall and the University Hospital were erected on the campus at that time. The Hospital was the first in this country to be built for the use of a Medical School. The Staff has from the beginning consisted solely of members of the faculty and the medical students for the last forty years have received most of their medical and surgical training in its wards and dispensaries.

In 1892 the Laboratory of Hygiene was built and in 1904 a new building was erected to accommodate the Laboratories of Pathology, Physiology and Pharmacology. Medical Hall was shortly thereafter vacated. The Robert Hare Laboratory of Chemistry, erected in 1877 and at one time the home of the Dental School, now houses the General Chemical Laboratories of the School of Medicine, the Laboratory of Physiological Chemistry and on the top floor the Dissecting Room.

The two-year course of instruction was changed in 1877 to three years and in 1893 to four years. In 1909, in addition to graduation from high school, one year's college work with courses in Physics, Biology and Chemistry was required for admission to the Medical School. In 1910 this was raised to two years of college work.

With the foundation of the John Rhea Barton Professorship of Surgery in 1878 the first endowed chair in a Medical School in this country was created.

The Wistar Institute of Anatomy and Biology, incorporated in 1892, was the first American University Institute devoted to advanced study and research in Anatomy and Biology.

In 1894 the William Pepper Laboratory of Clinical Medicine was

erected adjoining the University Hospital, the purpose of this Laboratory being to promote the interests of the patients by providing facilities for the prosecution of minute clinical studies and original researches. This was the first Clinical Laboratory in a separate building of its own to be erected in this country.

The Henry Phipps Institute for the study, treatment and prevention of tuberculosis, was established in 1903. The new building, located at Seventh and Lombard Streets, was completed in 1913. The Institute was the first fully organized and equipped institution of the kind with University connection.

In 1909 the University of Pennsylvania originated the first graduate courses in Public Health leading to the degree of Dr.P.H. The Laboratory of Hygiene was the first separate building erected for research work in Hygiene and for the teaching of this subject.

In 1910 the Department of Research Medicine was organized, this being the first University Department of the kind instituted in this country in which the workers are expected to devote practically their entire time to research.

In 1916 the merger between the Medico-Chirurgical College of Philadelphia and the University of Pennsylvania was completed and the Medico-Chirurgical Graduate School of the University of Pennsylvania was organized.

The number of graduates in the School of Medicine is 14,025.

PART I.

FACULTY.

EDGAR F. SMITH, PH.D., CHEM. D., SC.D., L.H.D., LL.D., PROVOST.

JOSIAH H. PENNIMAN, PH.D., LL.D., VICE-PROVOST.

WILLIAM PEPPER, A.B., M.D., Dean of the School of Medicine.

SENECA EGBERT, A.M., M.D., Associate Dean of the School of Medicine.

HORATIO C. WOOD, M.D., LL.D., Emeritus Professor Materia Medica, Pharmacy and General Therapeutics.

JAMES TYSON, A.M., M.D., LL.D., Emeritus Professor of Medicine.

CHARLES K. MILLS, PH.D., M.D., Emeritus Professor of Neurology.

PROFESSORS.

EDWARD T. REICHERT, M.D., SC.D., Professor of Physiology.

BARTON COOKE HIRST, A.B., M.D., LL.D., Professor of Obstetrics.

GEORGE A. PIERSOL, M.D., SC.D., Professor of Anatomy.

JOHN MARSHALL, M.D., NAT.SC.D., LL.D., Professor of Chemistry and Toxicology.

ALEXANDER C. ABBOTT, M.D., SC.D., DR.P.H., PEPPER Professor of Hygiene and Bacteriology.

JOHN G. CLARK, M.D., Professor of Gynecology.

GEORGE E. DE SCHWEINITZ, A.M., M.D., LL.D., Professor of Ophthalmology.

CHARLES H. FRAZIER, A.B., M.D., SC.D., Professor of Clinical Surgery.

CHARLES W. BURR, B.S., M.D., Professor of Mental Diseases.

R. TAIT McKENZIE, A.B., M.P.E., M.D., Professor of Physical Education and Physical Therapy.

RICHARD MILLS PEARCE, M.D., SC.D., Professor of Research Medicine.

- ALONZO ENGELBERT TAYLOR, M.D., BENJAMIN RUSH Professor of Physiological Chemistry.
- ALFRED N. RICHARDS, A.M., PH.D., Professor of Pharmacology.
- ALLEN J. SMITH, A.M., M.D., Sc.D., LL.D., Professor of Pathology and of Comparative Pathology; in charge of the courses in Tropical Medicine.
- EDWARD MARTIN, A.M., M.D., JOHN RHEA BARTON Professor of Surgery.
- GWILYM G. DAVIS, M.D., M.R.C.S. (Eng.), LL.D., Professor of Orthopedic Surgery.
- JOHN B. DEEVER, M.D., Sc.D., LL.D., Professor of Practice of Surgery.
- ALFRED STENGEL, M.D., Sc.D., Professor of Medicine.
- MILTON B. HARTZELL, A.M., M.D., LL.D., Professor of Dermatology.
- HENRY K. PANCOAST, M.D., Professor of Roentgenology.
- M. HOWARD FUSSELL, M.D., Professor of Applied Therapeutics.
- B. ALEXANDER RANDALL, A.M., M.D., PH.D., Professor of Otology.
- J. P. CROZER GRIFFITH, PH.D., M.D., Professor of Pediatrics.
- THOMAS R. NEILSON, A.M., M.D., Professor of Genito-Urinary Surgery.
- CHARLES P. GRAYSON, M.D., Professor of Laryngology and Rhinology.
- DAVID RIESMAN, M.D., Professor of Clinical Medicine.
- JOSEPH SAILER, PH.B., M.D., Professor of Clinical Medicine.
- WILLIAM G. SPILLER, M.D., Professor of Neurology.
- SENECA EGBERT, A.M., M.D., Professor of Hygiene, and Associate Dean.
- JOSEPH McFARLAND, M.D., Sc.D., Professor of Pathology and Bacteriology.
- JOHN C. HEISLER, M.D., Professor of Anatomy.
- GEORGE H. MEEKER, PH.D., Sc.D., LL.D., Professor of Chemistry.
- HORATIO C. WOOD, JR., M.D., Professor of Pharmacology and Therapeutics.

ON THE GEORGE B. WOOD FOUNDATION.

- DANIEL J. MCCARTHY, A.B., M.D., Professor of Medical Jurisprudence.

ASSOCIATE PROFESSORS.

JAMES K. YOUNG, M.D., Associate Professor of Orthopedic Surgery.

T. TURNER THOMAS, M.D., Associate Professor of Applied Anatomy and Associate in Surgery.

ADJUNCT PROFESSORS.

RICHARD H. HARTE, M.D., Adjunct Professor of Surgery.

JAMES P. HUTCHINSON, A.B., M.D., Adjunct Professor of Surgery.

ASSISTANT PROFESSORS.

ALFRED C. WOOD, M.D., Assistant Professor of Surgery.

RICHARD C. NORRIS, A.M., M.D., Assistant Professor of Obstetrics.

DAVID H. BERGEY, A.M., M.D., Assistant Professor of Hygiene and Bacteriology.

WILLIAM PEPPER, A.B., M.D., Assistant Professor of Clinical Pathology and Dean of the Faculty.

J. EDWIN SWEET, A.M., M.D., Assistant Professor of Surgical Research.

PAUL A. LEWIS, M.D., Assistant Professor of Pathology.

GEORGE W. NORRIS, A.B., M.D., Assistant Professor of Medicine.

EDWARD LODHOLZ, M.D., Assistant Professor of Physiology.

GEORGE FETTEROLF, A.B., M.D., ScD., Assistant Professor of Anatomy.

WILLIAM H. F. ADDISON, A.B., M.B., Assistant Professor of Histology and Embryology.

LEON A. RYAN, Ph.B., Ph.D., Assistant Professor of Chemistry and Toxicology.

HENRY ROBERT MURRAY LANDIS, A.B., M.D., Assistant Professor of Medicine.

JOHN ALBERT KOLMER, M.D., Dr.P.H., M.Sc., Assistant Professor of Experimental Pathology.

RALPH BUTLER, M.D., Assistant Professor of Otology.

OSCAR H. PLANT, M.D., Assistant Professor of Pharmacology.

DAMASO RIVAS, M.S., Ph.D., M.D., Assistant Professor of Parasitology.

EDWARD B. KRUMBHAAR, M.D., Assistant Professor of Research Medicine and Associate in Medicine.

ASSOCIATES.

THOMPSON S. WESTCOTT, A.B., M.D., Associate in Pediatrics.

HERMAN B. ALLYN, A.B., M.D., Associate in Medicine.

JOHN H. GIRVIN, M.D., Associate in Obstetrics.

WILLIAM R. NICHOLSON, A.B., M.D., Associate in Obstetrics.

JAMES W. McCONNELL, M.D., Associate in Neurology.

BROOKE M. ANSPACH, M.D., Associate in Gynecology.

JOHN B. CARNETT, M.D., Associate in Surgery.

GEORGE P. MÜLLER, A.B., M.D., Associate in Surgery.

JOHN H. JOPSON, M.D., Associate in Surgery.

JOHN C. HIRST, M.D., Associate in Obstetrics.

MAURICE OSTHEIMER, A.B., M.D., Associate in Pediatrics.

ALFRED R. ALLEN, M.D., Associate in Neurology and Neuropathology.

J. HAROLD AUSTIN, B.S., M.D., Associate in Medicine.

ALBERT PHILLIP FRANCINE, A.M., M.D., Associate in Medicine.

SEYMOUR DE WITT LUDLUM, B.S., M.D., Associate in Neurology and Neuropathology.

EDWARD HARRIS GOODMAN, M.D., Associate in Medicine.

GEORGE MORRIS PIERSOL, B.S., M.D., Associate in Medicine.

O. H. PERRY PEPPER, B.S., M.D., Associate in Medicine and in Research Medicine.

JOHN HERR MUSSER, B.S., M.D., Associate in Medicine.

CLIFFORD B. FARR, A.M., M.D., Associate in Medicine.

ROBERT G. TORREY, M.D., Associate in Medicine.

T. GRIER MILLER, A.B., M.D., Associate in Research Medicine.

LECTURERS.

ARTHUR A. STEVENS, A.M., M.D., Lecturer on Medicine.

B. FRANKLIN STAHL, Ph.G., B.S., M.D., Lecturer on Dietetics of the Sick and Associate in Medicine.

JOHN T. CARPENTER, M.D., Lecturer on Ophthalmology.

INSTRUCTORS.

CHARLES C. NORRIS, M.D., Instructor in Gynecology and Assistant in Gynecological Pathology.

EDWARD A. SHUMWAY, B.S., M.D., Instructor in Ophthalmology.

E. HOLLINGSWORTH SITER, M.D., Instructor in Genito-Urinary Surgery.

WALTER S. CORNELL, B.S., M.D., Instructor in Osteology.

THOMAS B. HOLLOWAY, M.S., M.D., Instructor in Ophthalmology.

H. MAXWELL LANGDON, M.D., Instructor in Ophthalmology.

J. CLAXTON GITTINGS, M.D., Instructor in Pediatrics.

WALTER G. ELMER, B.S., M.D., Instructor in Orthopedic Surgery.

HOWARD C. CARPENTER, M.D., Instructor in Pediatrics.

JOHN SPEESE, M.D., Instructor in Surgery, and in Surgical Pathology.

CHARLES A. FIFE, A.B., M.D., Instructor in Pediatrics.

THOMAS A. COPE, M.D., Instructor in Medicine.

BENJAMIN A. THOMAS, A.M., M.D., Instructor in Surgery.

FLOYD E. KEENE, M.D., Instructor in Gynecology.

CARL WILLIAMS, B.S., M.D., Instructor in Ophthalmology.

FRANK C. KNOWLES, M.D., Instructor in Dermatology and Assistant in Dermatological Pathology.

FRANK A. CRAIG, M.D., Instructor in Medicine.

JOHN M. CRUICE, A.B., M.D., Instructor in Medicine.

CHARLES M. MONTGOMERY, A.B., M.D., Instructor in Medicine.

GEORGE G. ROSS, M.D., Instructor in Surgery.

DAMON B. PFEIFFER, A.B., M.D., Instructor in Surgery.

ASTLEY P. C. ASHHURST, A.B., M.D., Instructor in Surgery.

ROBERT A. KEILTY, M.D., Instructor in Pathological Histology.

WILLIAM JACKSON MERRILL, A.B., M.D., Instructor in Orthopedic Surgery.

SAMUEL LEOPOLD, M.D., Instructor in Neurology and Neuropathology.

NATHANIEL S. YAWGER, M.D., Instructor in Neurology.

WILLIAMS B. CADWALADER, M.D., Instructor in Neurology and Neuropathology.

GEORGE H. CHAMBERS, M.D., Instructor in Histology.

J. REX HOBENSACK, M.D., Instructor in Anatomy.

HOWARD A. SUTTON, A.B., M.D., Instructor in Osteology.
WILLIAM E. QUICKSALL, M.D., Instructor in Anatomy.
PENN-GASKELL SKILLERN, JR., M.D., Instructor in Anatomy.
EDWIN C. TOWN, M.D., Instructor in Normal Histology.
FREDERICK D. WEIDMAN, M.D., Instructor in Gross Morbid Anatomy.

WARD BRINTON, A.M., M.D., Instructor in Medicine.

*NORMAN B. GWYN, M.D., Instructor in Medicine.

BENJAMIN D. PARRISH, B.S., M.D., Instructor in Otology.

HOWARD L. MARSH, M.S., Instructor in Chemistry.

THOMAS C. KELLY, A.M., M.D., Instructor in Medicine.

HENRY FIELD SMYTH, M.D., DR. P.H., Instructor in Bacteriology.

PHILIP FRANCIS WILLIAMS, PH.B., M.D., Instructor in Obstetrics.

ARTHUR H. HOPKINS, B.S., M.D., Instructor in Medicine and in Practical Therapeutics.

ARCHIBALD A. HOWELL, A.B., M.D., Instructor in Medicine.

ARTHUR H. GERHARD, A.B., M.D., Instructor in Medicine.

T. GRIER MILLER, A.B., M.D., Instructor in Medicine.

JAMES A. BABBITT, A.M., M.D., Instructor in Otology.

EUGENE L. PORTER, A.M., PH.D., Instructor in Physiology.

BYRON M. HENDRIX, B.S., PH.D., Instructor in Physiological Chemistry.

RAYMOND L. STEHLE, A.M., PH.D., Instructor in Physiological Chemistry.

ELDRIDGE L. ELIASON, A.B., M.D., Instructor in Surgery.

NORMAN L. KNIPE, PH.B., M.D., Instructor in Obstetrics.

CLARENCE D. DANIELS, M.D., Instructor in Obstetrics.

BENJAMIN C. GILE, M.D., Instructor in Otology.

ISAAC H. JONES, A.M., M.D., Instructor in Neuro-Otology.

JOSEPH P. TUNIS, A.B., M.D., Instructor in Laryngology and Rhinology.

B. F. BAER, M.D., Instructor in Ophthalmology.

EDMUND J. PIPER, M.D., Instructor in Obstetrics.

TRUMAN G. SCHNABEL, M.D., Instructor in Medicine.

GEORGE WILSON, M.D., Instructor in Neurology and Assistant Instructor in Medicine.

J. LEON HERMAN, M.D., Instructor in Anatomy and Assistant Instructor in Genito-Urinary Surgery.

* Absent on leave.

DE FORREST WILLARD, M.D., Instructor in Orthopedic Surgery.

G. VICTOR JANVIER, M.D., Instructor in Obstetrics.

SIMON S. LEOPOLD, M.D., Instructor in Clinical Pathology.

J. P. CHAPMAN, M.D., Instructor in Histology.

WILLIAM HARTZ, M.D., Instructor in Histology.

LEROY WILKES, M.D., Instructor in Histology.

VRAM S. NEDURIAN, M.D., Instructor in Histology.

GEORGE M. DORRANCE, M.D., Instructor in Applied Anatomy.

J. J. ROBRECHT, M.D., Instructor in Anatomy.

N. S. ROTHSCHILD, M.D., Instructor in Anatomy.

JUSTIN G. SCHWERIN, M.D., Instructor in Laryngology and Rhinology.

R. A. W. McKELDIN, M.D., Instructor in Laryngology and Rhinology.

R. A. BICKSTEIN, M.D., Instructor in Laryngology and Rhinology.

JOSEPH E. RHOADS, M.D., Instructor in Ophthalmology.

GEORGE M. LAWS, B.S., M.D., Instructor in Surgery.

ASSISTANT INSTRUCTORS.

JOHN W. BUSCH, M.D., Assistant Instructor in Surgery.

J. H. ALLEN, A.B., M.D., Assistant Instructor in Obstetrics.

LEON F. LUBURG, M.D., Assistant Instructor in Obstetrics.

CHARLES F. MITCHELL, M.D., Assistant Instructor in Surgery.

DAVID N. HUSIK, A.B., M.D., Assistant Instructor in Laryngology.

WILLIAM H. MACKINNEY, M.D., Assistant Instructor in Genito-Urinary Surgery.

EVERETT P. BARNARD, M.D., Assistant Instructor in Obstetrics.

HENRY WINSOR, M.D., Assistant Instructor in Surgery.

LEWIS FISHER, M.D., Assistant Instructor in Otology.

ENGELBERT C. BENDER, M.D., Assistant Instructor in Laryngology.

THOMAS A. O'HARA, A.B., M.D., Assistant Instructor in Orthopedic Surgery.

WILLIAM F. GUILFOYLE, M.D., Assistant Instructor in Surgery.

ALEXANDER RANDALL, A.M., M.D., Assistant Instructor in Genito-Urinary Surgery.

GEORGE W. OUTERBRIDGE, A.B., M.D., Assistant Instructor in Gynecology and in Gynecological Pathology.

HARRY BOND WILMER, M.D., Assistant Instructor in Medicine.

JOSEPH C. BIRDSALL, A.M., M.D., Assistant Instructor in Surgery.

FRANK B. BLOCK, M.D., Assistant Instructor in Gynecology.

ALONZO HAMILTON STEWART, M.D., DR.P.H., Assistant Instructor in Bacteriology.

SETH A. BRUMM, M.D., Assistant Instructor in Otology.

BALDUIN H. LUCKE, M.D., Assistant Instructor in Pathology.

HENRY P. BROWN, JR., B.S., M.D., Assistant Instructor in Surgical Pathology.

BENJAMIN F. BUZBY, A.B., M.D., Assistant Instructor in Surgical Pathology.

NATHANIEL GINSBURG, M.D., Assistant Instructor in Surgery.

FRANCIS G. HARRISON, M.D., Assistant Instructor in Surgery.

THOMSON F. EDWARDS, M.D., Assistant Instructor in Surgery.

RUTHERFORD L. JOHN, M.D., Assistant Instructor in Surgery.

THOMAS C. LLEWELLYN, M.D., Assistant Instructor in Gynecology.

RUFUS S. REEVES, M.D., Assistant Instructor in Medicine.

PHILIP G. KITCHEN, M.D., Assistant Instructor in Medicine.

DAVID L. FARLEY, M.D., Assistant Instructor in Surgery.

ALBERT L. USSET, M.D., Assistant Instructor in Surgery.

PROSECTOR.

HENRY WINSOR, M.D., Prosector in the Chair of Anatomy, and Prosector to the Associate Professor of Applied Anatomy.

ASSISTANTS.

J. GARRETT HICKEY, D.D.S., M.D., Assistant in Physiology.

HENRY P. BROWN, JR., B.S., M.D., Assistant in Anatomy, and in Operative Surgery.

HAROLD W. HOW, M.D., Assistant in Ophthalmic Pathology.

HARRY DUBIN, PH.D., Assistant in Research Medicine.

ELIZABETH BARLETT, *Secretary.*

**MEMBERS OF THE FACULTY APPOINTED FOR THE
SESSION 1916-17 TO TEACH AT SEVENTEENTH
AND CHERRY STREETS.**

JAMES M. ANDERS, PH.D., M.D., LL.D., Professor of the
Theory and Practice of Medicine and Clinical Medicine.

ERNEST LAPLACE, M.D., LL.D., Professor of Surgery and
Clinical Surgery.

W. EASTERLY ASHTON, M.D., LL.D., Professor of Gynecology.

L. WEBSTER FOX, M.D., LL.D., Professor of Ophthalmology.

GEORGE M. BOYD, M.D., Professor of Obstetrics.

JUDSON DALAND, M.D., Professor of Clinical Medicine.

EDWARD B. GLEASON, M.D., LL.D., Professor of Otology.

GEORGE E. PFAHLER, M.D., Professor of Roentgenology.

ALBERT E. ROUSSELL, A.M., M.D., Associate Professor of
Practice and Clinical Medicine.

JAMES P. MANN, M.S., M.D., Professor of Orthopedic Surgery.

HILARY M. CHRISTIAN, M.D., Clinical Professor of Genito-
Urinary Diseases.

CHARLES S. POTTS, M.D., Professor of Neurology.

THEODORE H. WEISENBURG, M.D., Professor of Neuro-
pathology and Clinical Neurology.

ALBERT C. BUCKLEY, A.M., M.D., Clinical Professor of Mental
Diseases.

HERBERT J. SMITH, PH.G., M.D., Clinical Professor of Der-
matology.

ROSS HALL SKILLERN, M.D., Clinical Professor of Laryn-
gology.

JAMES H. MCKEE, M.D., Professor of Pediatrics.

HERBERT HOWARD CUSHING, B.S., M.D., Professor of
Practical Anatomy.

L. NAPOLEON BOSTON, A.M., M.D., Professor of Physical
Diagnosis.

ARTHUR C. MORGAN, M.D., Associate Professor of Medicine.

PHILIPP FISCHER, M.D., Associate Professor of Histology
and Embryology.

JOHN HAMILTON SMALL, PH.D., M.D., Associate Professor
of Bacteriology.

FRANCIS J. DEVER, M.D., Associate Professor of Clinical
Medicine.

JOHN A. McGLINN, M.D., Assistant Professor of Obstetrics.
CHARLES B. REYNOLDS, M.D., Assistant Professor of Obstetrics.

SAMUEL A. LOEWENBERG, M.D., Assistant Professor of Physical Diagnosis.

JOHN J. GILBRIDE, A.M., M.D., Assistant Professor of Surgery.

GUY HINSDALE, M.D., Associate Professor of Climatology.

CAMILLE J. STAMM A.B., M.D., Assistant Professor of Gynecology.

JOHN A. McKENNA, M.D., Assistant Professor of Surgery.

SAMUEL McCLARY, 3d, M.D., Assistant Professor of Surgery.

HOWARD L. JAMESON, M.D., Associate in Medicine.

ANDREW CALLAHAN, M.D., Associate in Medicine.

ROBERT F. RIDPATH, M.D., Associate in Laryngology.

MITCHELL P. WARMUTH, M.D., Lecturer on Clinical Surgery.

JOSEPH F. ULMAN, M.D., Lecturer on Physiology.

TIMOTHY M. O'ROURKE, M.D., Instructor in Gynecology.

WARREN C. BATROFF, A.B., M.D., Director of the Clinical Laboratory.

ALBERT E. BLACKBURN, M.D., Lecturer on Medicine.

RICHARD S. DAVIS, M.D., Assistant to the Professor of Clinical Medicine.

WILLIAM T. JOHNSON, A.B., M.D., Instructor in Electro-Therapeutics.

ANDREW ANDERS, M.D., Lecturer on Medicine.

WILLIAM M. MENAH, M.D., Lecturer on Otology.

STILWELL C. BURNS, M.D., Instructor in Surgery.

EUGENE LINDAUER, M.D., Instructor in Neurology.

ERWIN H. ERNEY, M.D., Instructor in Clinical Neurology.

HOWELL S. ZULICK, M.D., Instructor in Pharmacology and Therapeutics and in Dermatology.

GEORGE H. DENNEY, M.D., Instructor in Ophthalmology.

OLIVER F. MERSHON, M.D., Instructor in Ophthalmoscopy.

FRANCIS A. MANTZ, M.D., Instructor in Surgery.

A. WEISE HAMMER, M.D., Instructor in Surgery.

STEPHEN MITTERLING, M.D., Instructor in Pathology and in Dermatology.

WILLIAM F. HESBACHER, M.D., Instructor in Otology.

WILLIAM M. HINKLE, M.D., Instructor in Otology.

FREDERICK M. STROUSE, M.D., Instructor in Laryngology.

BASIL R. BELTRAN, M.D., Instructor in Surgery.

ADOLPH COHN, M.D., Instructor in Orthopedics.

ROBERT C. PARRISH, M.D., Prosector.

HARRY C. FISH, M.D., Demonstrator of Physical Diagnosis.

CLARENCE N. SMITH, M.D., Assistant Director of the Laboratory of Clinical Medicine.

WARREN STIRLING, M.D., Assistant in Bacteriology.

THOMAS M. KELLY, M.D., Instructor in Genito-Urinary Diseases.

PERCY DeLONG, M.D., Instructor in Neurology.

HENRY M. LAESSLE, M.D., Instructor in Laryngology.

SYDNEY OLSHO, M.D., Instructor in Laryngology.

LOUIS DeM. SAJOUS, M.D., Instructor in Laryngology.

W. H. STONER, M.D., Assistant in Chemistry.

PART II.

THE MERGER BETWEEN THE UNIVERSITY OF PENNSYLVANIA AND THE MEDICO-CHIRURGICAL COLLEGE OF PHILADELPHIA.

In the spring of 1916 a merger between the University of Pennsylvania and the Medico-Chirurgical College having been accomplished, the following arrangements were made:—

Five members of the Medico-Chirurgical Faculty were added permanently to the Faculty of Medicine of the University of Pennsylvania: Seneca Egbert, M.D., Professor of Hygiene; Joseph McFarland, M.D., Professor of Pathology and Bacteriology; John C. Heisler, M.D., Professor of Anatomy; George H. Meeker, M.D., Professor of Chemistry; Horatio C. Wood, Jr., M.D., Professor of Pharmacology and Therapeutics.

Three classes (the first, second and fourth) of the Medico-Chirurgical College will still be taught for the season of 1916-17 at Seventeenth and Cherry Streets, the former location of that College. The other class (the third-year class) has been taken over bodily and is receiving all its instruction at the University of Pennsylvania. To teach the 176 students at Seventeenth and Cherry this winter, 67 former members of the Medico-Chirurgical College Faculty have been appointed for the session 1916-17 as members of the Faculty of the School of Medicine, University of Pennsylvania, these appointments being for but one year, as in the fall of 1917 the remaining Medico-Chirurgical undergraduate students in good standing will be transferred to the University of Pennsylvania for all their instruction.

ADMISSION REQUIREMENTS.

VACCINATION.

According to the Regulations of the Bureau of Health of the City of Philadelphia, the University of Pennsylvania is required to refuse admission to any person except upon a certificate signed by a physician stating that such person has been recently vaccinated or that he or she has previously had smallpox. All persons matriculating

in the University will, therefore, have to present such a certificate at the time of matriculation and in default of such certificate must be vaccinated. Official forms furnished by the Bureau of Health of the City of Philadelphia can be obtained by applying in person or by messenger at City Hall.

LIMITATION OF SIZE OF CLASSES.

The first and second year classes of the School of Medicine of the University of Pennsylvania are limited to one hundred students each.

The students last year at the Medico-Chirurgical College are now

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No entrance conditions are allowed. It is not now, and in fact it has not been possible since 1910, to enter the Medical School with deficiencies in the entrance requirements and to make these up either during the first year, between the first and second years, or later.

It is recommended that students in a position to complete their college courses should do so, whenever possible, including in their courses the necessary work in the sciences. Each year the percent-

* A unit of college work is the equivalent of one hour of lecture or recitation each week for the full academic year or of two hours of laboratory work each week for the same period.

NEW ENGLISH REQUIREMENTS FOR 1919.

Three units of English Composition (as represented in courses 1 and 3 in College Department of this University); one unit of English language (as represented by course 30 in the College Department of this University), and two units of English Literature (as represented by courses 40 and 42 in the College Department of this University).

(Please see catalogue of University of Pennsylvania, College fasciculus, English Department, for courses indicated).

in the University will, therefore, have to present such a certificate at the time of matriculation and in default of such certificate must be vaccinated. Official forms furnished by the Bureau of Health of the City of Philadelphia can be obtained by applying in person or by messenger at City Hall.

LIMITATION OF SIZE OF CLASSES.

The first and second year classes of the School of Medicine of the University of Pennsylvania are limited to one hundred students each.

The students last year at the Medico-Chirurgical College are now enrolled in the Medical School of the University of Pennsylvania. Thirty-three of these students are first-year men and fifty-three are second-year men. Both of these groups are, however, being taught this year at the former buildings of the Medico-Chirurgical College. At the beginning of the session 1917-18 the thirty-three in the first-year group will be admitted to the regular second-year class at the University. In consequence the second-year class next session will necessarily exceed this limit of one hundred. Only one hundred students, however, will be admitted to the first-year class for the session of 1917-18.

REQUIREMENTS FOR ADMISSION TO THE

MEDICAL SCHOOL, UNIVERSITY OF PENNSYLVANIA.

The minimum requirements are a standard four-year high school course or its equivalent, plus two years of work in an approved college of arts and science, aggregating not less than 30 units,* including courses in French or German and in Physics, Chemistry and General Biology or Zoölogy, with appropriate laboratory work (see detailed explanation below).

No entrance conditions are allowed. It is not now, and in fact it has not been possible since 1910, to enter the Medical School with deficiencies in the entrance requirements and to make these up either during the first year, between the first and second years, or later.

It is recommended that students in a position to complete their college courses should do so, whenever possible, including in their courses the necessary work in the sciences. Each year the percent-

* A unit of college work is the equivalent of one hour of lecture or recitation each week for the full academic year or of two hours of laboratory work each week for the same period.

age of students with collegiate degrees entering medical schools in this country is steadily increasing. Men and women are admitted upon the same terms.

STATE PRELIMINARY REQUIREMENTS.

The requirements for admission to the medical course of a college in the State of Pennsylvania call for the completion of a standard four-year high school course of study, or its equivalent, and a year of college credits in each of the sciences, Physics, Chemistry and Biology. By presenting satisfactory credentials the applicant may secure, through an Examiner, a State Preliminary Certificate (John Loman, Examiner, Perry Building, Sixteenth and Chestnut Streets, Philadelphia, Pa.). Such a certificate *will not, unless accompanied by sufficient additional credentials, be accepted as evidence that the applicant has met the University of Pennsylvania requirements.*

State Preliminary Certificates are required of those graduates in medicine who present themselves before the Bureau of Medical Education and Licensure for a license to practice in the State of Pennsylvania.

APPLICATION FOR ADMISSION.

Applications should be made to the Dean of the Medical School, who will furnish a printed application blank, part of which is to be filled out by the candidate and part by the proper authorities of the College at which the candidate has prepared for the study of Medicine.

Candidates who present certificates filled out on the application blank, from recognized colleges giving evidence that they have met all the requirements of the Medical School of the University of Pennsylvania will be admitted without examinations, if vacancies exist in the class to which admission is sought. The certificates must show the exact amount of French or German, Physics, Chemistry and Zoölogy or General Biology studied, and should be accompanied by the laboratory note books of the candidate in these subjects. Candidates who are unable to meet the requirements by certificate, may apply for examinations in the subjects in which they are deficient. Applications for such examinations should be made to George Gailey Chambers, Ph.D., Director of Admissions, Room 113, College Hall, University of Pennsylvania, not later than June 1st.

Full credit for the required amount of Physics, Chemistry, and

Zoölogy or General Biology cannot be obtained by examination alone, as a satisfactory amount of laboratory work in these sciences must have been completed at college and the certified laboratory note books of the candidate in these subjects must have been presented to the Dean of the Medical Faculty.

The decision as to whether a candidate's preparation meets the entrance requirements of the University of Pennsylvania rests with an Admission Committee composed of three members of the Faculty of the College of this University. As the size of the first-year class is limited, it is proposed in case a greater number apply, to choose one hundred of the most promising applicants. The selection will be made after carefully considering the following points: the character of the college at which the candidate prepared; the standing of the applicant especially in the three sciences and the opinion held by one of the science teachers of the candidate's ability and fitness to pursue the study of medicine at the University of Pennsylvania, this opinion to be sent to the Dean in a personal letter.

Applications for admission may be presented at any time before July 1st, but will not be considered officially before that date except in unusual circumstances. Notification of acceptance for enrollment as a student or of non-acceptance through lack of space will be sent all candidates not later than July 15th.

DETAILED DESCRIPTION OF COLLEGE WORK.

A. The following subjects must be offered and in the sciences include laboratory work. The candidate's laboratory note books should be presented, certified by the teacher in the usual way.

Subjects	Units
Chemistry—including both General Chemistry and Qualitative Analysis (Organic Chemistry will be required in 1919).....	6
Physics	4
Zoölogy or General Biology	4
French or German	3

(Elementary courses in either French or German taken in college will not be considered as meeting this requirement. For example, a student who has not presented French for college entrance must, in order to receive credit for three units of college French, take first in college a course in elementary French followed by a three-unit course in more advanced French. This rule holds also for German.)

(For full description of the three science requirements see below.)

B. At least thirteen units, made up of subjects which are open to Freshmen and Sophomores in colleges or universities of recognized standing.

For description of appropriate branches representing this portion of the candidate's preparation, reference may be made to the College Announcement or the Annual Catalogue of this University.

The various studies are not here detailed; since considerable latitude of election exists in many colleges and more or less variation in prescribed courses also occurs in different college curricula. Such differences occasioned by election or by regular requirements of institutions will be adjudged by comparison with the work of the Freshman and Sophomore classes of the College of the University of Pennsylvania.

REPRESENTING SPECIAL SCIENTIFIC REQUIREMENTS FOR MEDICAL STUDIES.

Laboratory note-books, properly certified, should be submitted with diploma or certificate.

CHEMISTRY.

Credits for six units in General and Analytical collegiate Chemistry are prerequisite for admission to the School of Medicine. These requirements are in general covered by the regular courses in chemistry in colleges recognized by this University. They are covered by courses 1 and 3 of the Department of Chemistry of this University. Credits in chemistry (whether by diploma, certificate or on examination) presented by candidates must be equivalent to said courses 1 and 3 of the Department of Chemistry of this University. Although Organic Chemistry is not as yet required, it is strongly recommended. *For the class entering in the fall of 1919* six units of college work in chemistry will still be required, but at least *two units* must be presented in *organic chemistry*. Laboratory work must accompany the course in organic as well as in inorganic chemistry.

PHYSICS.

Credits for four units of collegiate Physics are prerequisite for admission to the School of Medicine. These requirements are in general covered by the regular lecture and laboratory courses in Physics in colleges recognized by this University. Courses 1 and 2 of the Department of Physics of this University fulfill the requirements. Plane Trigonometry (Mathematics 2) is a prerequisite.

Physics 1 is an elementary College Course in General Physics, consisting of one lecture hour and two hours recitation per week for one year, and counts two units of collegiate work.

Physics 2 is a laboratory course, consisting of one lecture and two hours laboratory work per week for one year. Each student performs about twenty-five experiments chosen from the entire field of elementary Physics. This course also counts two units.

Any similar courses offered by recognized colleges, and equivalent in both amount and grade of work, will be accepted as fulfilling the requirements for admission to the School of Medicine.

GENERAL BIOLOGY OR GENERAL ZOÖLOGY.

Credits for four units of collegiate Biology or Zoölogy are prerequisite for admission to the School of Medicine. Credits in these subjects must be equivalent to Course 1 of the Department of Zoölogy (3 units) or to half of Course 1 of the Department of Zoölogy together with half of Course 1 of the Department of Botany (3 units) of this University. In addition one extra unit must be presented in similar subjects. Botany alone does not meet the requirements.

TWO-YEAR COURSE PREPARATORY TO MEDICINE.

Students who wish to spend two years in the College of the University of Pennsylvania, preparatory to the School of Medicine, should register in Arts and Science* and should be careful to present for admission either French or German. They should inform the Dean of the College that it is their intention to enter the Medical School, when they will be referred to an appropriate advisor. Students will be admitted to the Medical School from the College, who present a certificate from the Dean of the College stating that in his opinion the student is fitted to pursue the study of medicine. For full details see the Announcement of the College, copies of which may be had upon application to the Dean of the College.

SEVEN-YEAR COMBINED MEDICAL AND COLLEGIATE COURSE.

A student in the course in Arts and Science of the University of Pennsylvania may, in his Senior year, provided the Dean of the College certifies to his fitness to study medicine, register also as a regular student in the First-year Class in the School of Medicine (see page 94, University of Pennsylvania General Catalogue).

*Men who wish to spend but two years in the College should register in the course in Arts and Science; women should register in the course in Biology.

ADMISSION TO ADVANCED STANDING.

Applicants for Advanced Standing must have met in full the requirements for admission (page 29), and must have attended a medical school, approved by this University; all such are included in the classified list of medical schools prepared by the Council on Medical Education of the American Medical Association, under the rating of Class A.

As the size of the second-year class is limited to one hundred, only such vacancies as may have occurred will be filled.

Applicants must present evidence that they have satisfactorily completed courses equivalent in kind and amount to those given at the University of Pennsylvania in the year or years preceding that to which admission is desired, and must present also a letter of honorable dismissal. Each applicant in addition must, unless specifically exempted, undergo an examination in each subject completed by the class which he seeks to enter. Each head of department in this school may grant exemption from examination in his subject, provided the character and extent of instruction and grade obtained in the school in which the applicant has previously studied are considered satisfactory. *Applicants should, therefore, obtain letters describing their work and standing from the head of each department under whom they have studied.* When the heads of departments in this University are not personally familiar with the character and scope of the work in their particular subject, as given in another school, in addition to letters of recommendation, information must be furnished supplementing the brief description customarily published in the school catalogue.

It is very essential that applications for admission to advanced standing be forwarded to the Dean not later than June 1st. It is also necessary that applicants send or present to the Dean their subject credentials and letters of recommendation to the heads of the respective departments before June 15th, so that these can be examined by the various professors before the beginning of the summer vacation.

No student coming from another school will be allowed any privileges in this school, which would have been denied him in the school which he leaves.

No student will be admitted to any class on advanced standing with a condition in any subject.

ADMISSION TO SECOND-YEAR CLASS.—Applicants who have attended one year in an approved medical school are admitted so

long as vacancies exist to the Second-year Class, unless specifically exempted, upon passing a satisfactory examination in Physiological Chemistry, Anatomy and in Bacteriology.

ADMISSION TO THIRD-YEAR CLASS.—Applicants who have attended two years in an approved medical school are admitted to the Third-year Class, unless specifically exempted, upon passing a satisfactory examination in Physiological Chemistry, Anatomy, Bacteriology, Pathology, Physiology, Pharmacology and Toxicology.

ADMISSION TO FOURTH-YEAR CLASS.—The clinical work of the third and fourth years is so distributed and the specialties so divided between these two years that applicants who have finished three years in another school will be admitted to the Fourth-year Class when the differences in the curricula of the two schools do not make it impossible to adjust their studies in the fourth year in this University; and unless specifically exempted, upon the applicant passing satisfactory examinations in all the subjects completed in the first three years in this school.

Graduates of medical schools having an equal rating to that given this school by the Council on Medical Education of the A.M.A., who wish to obtain the degree M.D. also from the University of Pennsylvania, and to pursue in this way what it is felt will prove a valuable post-graduate year of clinical work, provided they have met in full the requirements for admission (page 29), will be admitted to the Fourth-year Class, unless specifically exempted, upon passing a satisfactory examination in all the subjects completed in the first three years in this school.

PART III.

UNDERGRADUATE INSTRUCTION.

The course of instruction extends over a period of four years, with one session in each year, beginning on the last Friday of September and ending on the third Wednesday in June.

The course may be said to be divided into two periods of two years each: the first period devoted to the fundamental medical sciences, Physiological Chemistry, Toxicology, Anatomy, Physiology, Bacteriology, Pharmacology and Pathology, including also Physical Education; the second period to the clinical subjects, Medicine, Surgery, Obstetrics and the Specialties.

FIRST PERIOD.

The subjects of the first two years have been arranged according to a modification of the concentration system. By this system the student is enabled to concentrate his energy upon one or two subjects, and must master these before he is allowed to continue the course. Thus the first year is devoted chiefly to Anatomy, including Embryology, Normal Histology and Osteology, and to Physiological Chemistry, and Bacteriology.

The subjects of the second year follow in logical sequence those of the year preceding. The time of the second year is thus given over largely to Physiology, Pathology and Pharmacology. In addition to these the work of the second year includes a course in Toxicology.

Instruction upon the subjects of the first two years is almost entirely practical, so that the greater part of the student's time is spent in the laboratories. In the Laboratories of Anatomy, in those of Pathology, Physiology and Pharmacology, which were opened in June, 1904, and in the bacteriological section of the Laboratory of Hygiene, the students are afforded unsurpassed facilities for practical work in these fundamental subjects.

The limitation of the first- and second-year classes to one hundred students each prevents the possibility of overcrowding the laboratories and insures a proper amount of individual instruction.

SECOND PERIOD.

With the beginning of the third year the student enters upon the second period, which covers the third and fourth years, and is de-

HOUR.		THURSDAY.		FRIDAY.	
		October 9 to November 11	November 13 to December 21	October 9 to November 11	November 13 to December 21
	Medical Trimester:				
2-4*	Medical Wards, Uni	1-13	14-25	1-13	14-25
2-3	Drs. Stevens and A				
	phia Hospital....	.....	.....	14-25	1-13
3-4	† Pediatrics.....	14-25	1-13	14-25	1-13
2-3	Fussell, Applied Th	14-25	1-13	.....	.....
	Elective Trimester:				
3-4	Neurology { Univer	.....	.....	39-50	26-38
	Philade	.....	.....	{ 33-38	{ 45-50
		.....	.....	{ 26-32	{ 39-44

HOUR.		THURSDAY.		FRIDAY.	
		January 3 to February 3	February 5 to March 10	January 3 to February 3	February 5 to March 10
	Medical Trimester:				
2-4*	Medical Wards, Uni	26-38	39-50	26-38	39-50
2-3	Drs. Stevens and				
	phia Hospital....	.....	.....	39-50	26-38
3-4	† Pediatrics.....	39-50	26-38	39-50	26-38
2-3	Fussell, Applied Th	39-50	26-38	.....	.....
	Elective Trimester:				
3-4	Neurology { Univer	.....	.....	63-74	51-62
	Philade	.....	.....	{ 57-62	{ 69-74
		.....	.....	{ 51-56	{ 63-68

HOUR.		THURSDAY.		FRIDAY.	
		March 12 to April 14	April 16 to May 19	March 12 to April 14	April 16 to May 19
	Medical Trimester:				
2-4*	Medical Wards, Un	51-62	63-74	51-62	63-74
2-3	Drs. Stevens and				
	phia Hospital....	.....	.....	63-74	51-62
3-4	† Pediatrics.....	63-74	51-62	63-74	51-62
2-3	Fussell, Applied Th	63-74	51-62	.....	.....
	Elective Trimester:				
3-4	Neurology { Univer	.....	.....	14-25	1-13
	Philade	.....	.....	{ 8-13	{ 20-25
		.....	.....	{ 1-7	{ 14-19

* Tuesdays and Thursday
† Mondays, Wednesdays
‡ Dr. Ludlum will meet b

FOURTH YEAR—SESSION 1916-17.

FIRST PERIOD.

WARD CLASSES—AFTERNOON.

HOUR.	SUBJECT.	MONDAY.		TUESDAY.		WEDNESDAY.		THURSDAY.		FRIDAY.	
		October 9 to November 11	November 13 to December 21	October 9 to November 11	November 13 to December 21	October 9 to November 11	November 13 to December 21	October 9 to November 11	November 13 to December 21	October 9 to November 11	November 13 to December 21
Medical Trimester:											
2-4*	Medical Wards, University Hospital.....	1-13	14-25	1-13	14-25	1-13	14-25	1-13	14-25	1-13	14-25
2-3	Drs. Stevens and Allyn, Medical Wards, Philadel- phia Hospital.....	14-25	1-13	.....	.....	14-25	1-13	.....	.....	14-25	1-13
3-4	† Pediatrics.....	14-25	1-13	14-25	1-13	14-25	1-13	14-25	1-13	14-25	1-13
2-3	Fussell, Applied Therapeutics, University Hospital..	.....	.....	14-25	1-13	.....	.....	14-25	1-13	.....	.....
Elective Trimester:											
3-4	Neurology { University Hospital, Dr. Leopold.....	26-38	39-50	.....	.....	.....	.....	.....	.....	39-50	26-38
	{ Philadelphia Hospital { Dr. Ludlum.....	† { 39-44	{ 26-32	.....	.....	.....	.....	.....	.....	{ 33-38	{ 45-50
	{ Dr. McConnell..	{ 45-50	{ 33-38	.....	.....	.....	.....	.....	.....	{ 26-32	{ 39-44

SECOND PERIOD.

HOUR.	SUBJECT	MONDAY.		TUESDAY.		WEDNESDAY.		THURSDAY.		FRIDAY.	
		January 3 to February 3	February 5 to March 10	January 3 to February 3	February 5 to March 10	January 3 to February 3	February 5 to March 10	January 3 to February 3	February 5 to March 10	January 3 to February 3	February 5 to March 10
Medical Trimester:											
2-4*	Medical Wards, University Hospital.....	26-38	39-50	26-38	39-50	26-38	39-50	26-38	39-50	26-38	39-50
2-3	Drs. Stevens and Allyn, Medical Wards, Philadelphia Hospital.....	39-50	26-38	.....	.....	39-50	26-38	.....	.....	39-50	26-38
3-4	† Pediatrics.....	39-50	26-38	39-50	26-38	39-50	26-38	39-50	26-38	39-50	26-38
2-3	Fussell, Applied Therapeutics, University Hospital..	.....	.....	39-50	26-38	.....	.....	39-50	26-38	.....	.....
Elective Trimester:											
3-4	Neurology { University Hospital, Dr. Leopold.....	51-62	63-74	.....	.....	.....	.....	.....	.....	63-74	51-62
	{ Philadelphia Hospital { Dr. Ludlum.....	{ 63-68	{ 51-56	.....	.....	.....	.....	.....	.....	{ 57-62	{ 69-74
	{ Dr. McConnell..	{ 69-74	{ 57-62	.....	.....	.....	.....	.....	.....	{ 51-56	{ 63-68

THIRD PERIOD.

HOUR.	SUBJECT.	MONDAY.		TUESDAY.		WEDNESDAY.		THURSDAY.		FRIDAY.	
		March 12 to April 14	April 16 to May 19	March 12 to April 14	April 16 to May 19	March 12 to April 14	April 16 to May 19	March 12 to April 14	April 16 to May 19	March 12 to April 14	April 16 to May 19
Medical Trimester:											
2-4*	Medical Wards, University Hospital.....	51-62	63-74	51-62	63-74	51-62	63-74	51-62	63-74	51-62	63-74
2-3	Drs. Stevens and Allyn, Medical Wards, Philadelphia Hospital.....	63-74	51-62	.....	.....	63-74	51-62	.....	.....	63-74	51-62
3-4	† Pediatrics.....	63-74	51-62	63-74	51-62	63-74	51-62	63-74	51-62	63-74	51-62
2-3	Fussell, Applied Therapeutics, University Hospital..	.....	.....	63-74	51-62	.....	.....	63-74	51-62	.....	.....
Elective Trimester:											
3-4	Neurology {	University Hospital, Dr. Leopold.....	1-13	14-25	.....	.....	.....	.....	.....	14-25	1-13
		Philadelphia Hospital { Dr. Ludlum.....	† { 14-19	{ 1-7	.....	.....	.....	.....	.....	{ 8-13	{ 20-25
		{ Dr. McConnell..	{ 20-25	{ 8-13	.....	.....	.....	.....	.....	{ 1-7	{ 14-19

* Tuesdays and Thursdays until 4.30.

† Mondays, Wednesdays and Fridays at University Hospital, Children's Dispensary. Tuesdays and Thursdays, Philadelphia Hospital, Children's Home.

‡ Dr. Ludlum will meet both sections on Mondays, and Dr. McConnell both sections on Friday

voted almost exclusively to instruction in the so-called clinical subjects—Medicine, Surgery, Obstetrics and the Specialties. There is no sharp dividing line between the work of the third and fourth years, so that the courses in the clinical subjects may be said to cover a period of two years.

From a glance at the tabular representation of the hours of instruction for the third and fourth years (later pages), it will be seen that arrangements have been made to keep the student fully occupied throughout each day. No especial opportunities are offered him to engage in special lines of work before he graduates. In point of fact, any desire to specialize before graduation is rather discouraged. It has always been the object and aim of this institution to prepare its students for the practice of general medicine, not to graduate them as "specialists." *Its policy has been to offer the student a well-graded, well proportioned and comprehensive course*, so that upon his graduation he stands prepared to *practice* medicine. Should he decide to take up a specialty or to engage in teaching or investigation after graduation, he will be the better prepared by his broad education, and still better prepared if he has had several years of clinical experience.

The methods of instruction are varied, but mostly practical. The latter include ward visits, ward classes, clinical conferences and practical observation in the wards and out-patient department of the University Hospital. Systematic lectures, general clinics and recitations have been found indispensable, but play a less conspicuous part in the course.

The facilities for instruction are abundant. It is possible to offer to each student opportunities to come into personal contact under proper supervision with a large and varied series of cases. The University Hospital, with its capacity of 400 beds, is operated exclusively for the benefit of the School of Medicine. Adjoining the University campus is the Philadelphia General Hospital, with a capacity of 1600 beds, where the wards are open to both teachers and students throughout the year; this not including the adjoining Philadelphia Insane Hospital, with over 2000 beds, also available for teaching purposes. Material advantage is had, too, by the students of the Fourth-year Class in attendance in sections upon the work of the Phipps Institute for the Study, Prevention and Cure of Tuberculosis, recently acquired by the University through the generosity of Mr. Henry Phipps.

In addition, extramural teaching is conducted in the Children's, the German and Pennsylvania Hospitals by members of the teach-

ing staff. A voluntary course upon the contagious diseases, conducted at the Municipal Hospital, is offered to the members of the Graduating Class.

COURSES OF INSTRUCTION.

The figures at the right of the page indicate fairly accurately the number of hours of instruction which each individual student receives in the various required courses.

ANATOMY.

GEORGE A. PIERSON, M.D.....	<i>Professor of Anatomy.</i>
JOHN C. HEISLER, M.D.....	<i>Professor of Anatomy.</i>
T. TURNER THOMAS, M.D.....	<i>Associate Professor of Applied Anatomy.</i>
GEORGE FETTEROLF, M.D.....	<i>Assistant Professor of Anatomy.</i>
WILLIAM H. F. ADDISON, M.B.....	<i>Assistant Professor of Histology and Embryology.</i>
WALTER S. CORNELL, M.D.....	} <i>Instructors in Osteology.</i>
HOWARD A. SUTTON, M.D.....	
J. REX HOBENSACK, M.D.....	} <i>Instructors in Anatomy.</i>
WM. E. QUICKSALL, M.D.....	
PENN-GASKELL SKILLERN, JR., M.D.	
J. LEON HERMAN, M.D.....	
J. J. ROBRECHT, M.D.....	
N. S. ROTHSCHILD, M.D.....	} <i>Instructors in Histology.</i>
GEORGE M. DORRANCE, M.D.....	
GEORGE H. CHAMBERS, M.D.....	
EDWIN C. TOWN, M.D.....	
C. D. DANIELS, M.D.....	
J. P. CHAPMAN, M.D.....	
WILLIAM HARTZ, M.D.....	
LEROY WILKES, M.D.....	
VRAM NEDURIAN, M.D.....	} <i>Prosector to Professor of Anatomy and to Associate Professor of Applied Anatomy.</i>
HENRY WINSOR, M.D.....	
HENRY P. BROWN, JR., M.D.....	<i>Volunteer Assistant in Anatomy.</i>
ERWIN F. FABER.....	<i>Instructor in Drawing.</i>

Of the following courses in Anatomy, I to VI, inclusive, are required of candidates for the degree of Doctor of Medicine. Courses VII to XI are not required, but may be taken by students who have had satisfactory preparatory training.

FIRST YEAR.

	Hours
I. LECTURES ON SYSTEMATIC ANATOMY OF THE ORGANS. <i>Professor Piersol</i> .—Three times a week, first half year....	48
II. LECTURES ON ANATOMY OF THE CENTRAL NERVOUS SYSTEM AND ORGANS OF SPECIAL SENSE. <i>Professor Piersol</i> .—Three times a week, second half year.....	48
III. LABORATORY COURSE IN HISTOLOGY AND EMBRYOLOGY. <i>Assistant Professor Addison, Drs. Chambers and Town</i> .—Two and a half hours, twice a week, first half year; three and a half hours, twice a week, second half year..	192
IV. LABORATORY COURSE IN OSTEOLOGY. <i>Drs. Cornell and Sutton</i> .—Two and a half hours, five times a week, first four weeks, first half year	50
V. DISSECTION. <i>Assistant Professor Fetterolf, Drs. Hobensack, Quicksall, Skillern and Herman</i> .—Two hours and a half, five times a week, for twenty-eight weeks.....	350

THIRD YEAR.

	Hours
VI. APPLIED ANATOMY. <i>Associate Professor Thomas</i> .—One hour, twice a week, throughout the year	64
VII. SPECIAL COURSE ON ANATOMY OF SENSE ORGANS. <i>Professor Piersol</i> .—February 1 to May 15; Wednesday mornings.	
VIII. SPECIAL COURSE IN ANATOMY OF FRACTURES AND LUXATIONS.	
IX. ADVANCED LABORATORY COURSE IN VERTEBRATE EMBRYOLOGY. <i>Professor Piersol and Dr. Addison</i> .—October 15 to May 1; mornings.	
X. LABORATORY COURSE IN MICROSCOPICAL TECHNIQUE. <i>Professor Piersol and Dr. Addison</i> .—April 1 to May 15; three mornings weekly.	
XI. ADVANCED WORK AND ORIGINAL INVESTIGATION. <i>Professor Piersol</i> .—October to May.	

Courses I and II, three lectures a week throughout the session, present the principles, as well as details, of human anatomy, including structure and development. Especial pains are taken to impress

the broader morphological significance of the details of human anatomy. These courses are exceptionally well illustrated by means of charts, lantern, models, museum preparations and fresh dissections, the unusual resources of the Wistar Institute of Anatomy and Biology being additionally available, not only for class instruction, but also for individual study.

In Course III the student is required to mount, study and draw preparations of all of the important tissues and organs of the human body, as well as to learn the methods employed in their preparation.

Time also is devoted to the mounting and study of series of chick and mammalian embryos. The laboratory is equipped with excellent microscopes of recent model, and supplied with the most approved apparatus for histological and embryological work.

Course IV includes the detailed study of the skeleton, each student being provided with bones which he is required to draw, noting the important features and principal muscular attachments. The joints are also studied on finished dissections. Bones are lent to students upon conditions similar to those governing the issue of books from a library.

Course V forms a most important part of the first-year work, every student being required to carefully dissect and pass practical examinations upon the cadaver. The class works two and a half hours daily under the close supervision of the Assistant Professor of Anatomy and his assistants. Excellent and abundant dissecting material is assured by the improved methods of preservation and the facilities for cold storage. Opportunity for additional work is afforded to students who desire to devote more time to practical anatomy.

Course VI is a continuation of the study of anatomy, but from the standpoint of its application, and not as an abstract science. The course embraces surface anatomy, the outlines of the organs, the position of the joints, significance of bony points, muscular swells, the position and means of recognizing the various nerves and arteries; the influence of the muscles in fractures; the construction of joints in reference to luxations; a knowledge of the parts incised in amputations; how the parts influence and direct the progress of abscesses; a knowledge of the lymphatics in reference to pyogenic and carcinomatous infections; a knowledge of the position and relation of the abdominal organs necessary for diagnostic and operative purposes; also those of the chest; cerebral localization, paralysis, etc., and innumerable other facts. Attention is given to the relation of the various tissues and organs to each other, so that the opera-

tions on those parts may be understood. It is the object of the course to present to the student the subject of anatomy in such manner as to enable him to utilize it in forming diagnoses and applying methods of treatment.

Instruction is given by demonstrations. These embrace the living and dead body and anatomical preparations. Special dissections and preparations are made to illustrate and explain fractures, dislocations, amputations, ligation of arteries, the position and relation of organs by frozen sections, etc., and also by injections of wax, the affections of the joints, palmar and other abscesses, etc.

BACTERIOLOGY AND HYGIENE.

ALEXANDER C. ABBOTT, M.D., Sc.D., Dr. P.H., *PEPPER Professor of Hygiene and Bacteriology.*

SENECA EGBERT, M.D.....*Professor of Hygiene.*

DAVID H. BERGEY, A.M., M.D., Dr.P.H., *Assistant Professor of Hygiene and Bacteriology.*

HENRY FIELD SMYTH, M.D., Dr.P.H., *Instructor in Hygiene and Bacteriology.*

ALONZO HAMILTON STEWART, M.D., Dr.P.H., *Assistant Instructor in Bacteriology.*

———,THOMAS A. SCOTT *Fellow in Hygiene.*

———,GEORGE B. WOOD *Fellow in Hygiene.*

BACTERIOLOGY.

FIRST YEAR.

	Hours
LECTURES. <i>Professor Abbott.</i> —Once a week, first half year....	16
LABORATORY. <i>Professor Abbott, Assistant Professor Bergey, Drs. Smyth and Stewart.</i> —Three and a half hours, four times a week, second half year	190

I. LECTURES. This course comprehends those elementary phases of the subject with which the student should be familiar at the time he begins his practical work.

II. LABORATORY COURSE. During this course the students receive instruction in the use of the microscope in bacteriological work; the methods of cultivating bacteria and of isolating them in pure cultures; the steps necessary to the identification of particular species of bacteria; the relation of bacteria to infection; the methods of immunization and vaccination; the methods of sterilization and dis-

infection; the testing of disinfectants; the bacteriological study of air, water and soil, etc. Such students as demonstrate ability to advance beyond the class work are given the opportunity to do so and are encouraged to pursue such studies providing the latter do not interfere with hours assigned to other subjects.

The course in detail covers the following subjects:

1. Apparatus employed—sterilizers, incubators, pressure regulators, thermostats, etc.
2. Culture media, methods of preparation, sterilization methods.
3. Characteristics of cultures of bacteria in general and of special forms.
4. Methods of obtaining, from mixtures of different bacteria, individual species in pure cultures.
5. Microscopic technique. Use and care of instruments, staining from cultures, section cutting, and staining and mounting of tissues.
6. Pathogenic bacteria isolation, identification and inoculation.
7. Disinfection, thermal and chemical, methods and apparatus, modes of testing efficiency.
8. Bacteriological investigation of water.
9. Bacteriological investigation of air.
10. Bacteriological investigation of soil.
11. Studies in immunity, including: the antitoxic state and the modes of inducing it; protective vaccinations with living and dead viruses; and the opsonic theory.
12. Demonstration of such protozoa as are known to be of medical significance.

HYGIENE.

THIRD YEAR.

	Hours
LECTURES. <i>Professor Abbott</i> .—Twice a week, for first half	
year	32

The teaching in Hygiene consists of a course of systematic lectures to the Third-year Medical students, and, if time be available of practical exercises in the laboratory. The didactic course is compulsory for all students receiving the degree of Doctor of Medicine, while the practical course is voluntary.

The lectures are given twice weekly throughout the first term. They cover the following topics of general sanitary importance:

A consideration of the factors concerned in the direct causation of disease, and the manifold conditions of life that indirectly favor

the occurrence of disease among individuals, groups of individuals and communities.

A brief sketch of the important transmissible and epidemic diseases, embracing a discussion of their modes of transmission, portals of infection, geographical and seasonal distribution and the approved methods of their prevention.

A consideration of prophylaxis in general, embracing disinfection and disinfectants, protective vaccination and the antitoxic state, the disposal of the dead after infectious diseases, and quarantine.

The hygiene of milk production. The legal aspects of public health administration.

The atmosphere, from the chemical, physical, and biological standpoints; the air of enclosed spaces; the problems of ventilation and heating; the various pollutions of the atmosphere, such, for instance, as those from the soil, from industries, from sewers, etc., and their influence on health and disease.

Water—its sanitary significance; the characteristics of waters from various sources and their suitability to domestic needs; the pollutions to which waters from different sources are liable; the biological significance of these pollutions; interpretations of the results of analysis; natural and artificial purification of waters; the relation of water to health and disease.

Sewage—the part taken by the soil and its constituents in the disposal of organic waste; the characteristics of sewage from different sources; the various methods for the disposal of sewage; the influence of sewage disposal upon the health of communities.

PRACTICAL COURSE. *Professor Abbott, Assistant Professor Bergey and Dr. Smith.*—The following subjects, arranged especially for the needs of those students intending to enter upon the practical pursuit of sanitary work, are taken up:

1. The atmosphere, climate and meteorological observations and records, chemical analysis, bacteriological investigation, methods of investigation, methods of ventilation and heating.
2. Water—physical, chemical and bacteriological investigation of water-supplies; methods of obtaining samples; qualitative and quantitative analysis for impurities; collection, storage and purification of water intended for domestic use; effects of filters, aeration, etc.
3. Sewage disposal, sewers, house drainage and the air of sewers.
4. Disposal of refuse, cremation of garbage, etc.
5. Soils and building sites, physical, chemical and bacteriological investigation, soil and moisture, ground air.

6. Foods—adulteration, milk and meat inspections.
7. Clothing—microscopic examination, poisonous dyes.
8. Management of contagious diseases. Practical tests of different methods of disinfection, chemical and thermal; notification, isolation and quarantine.
9. Vital statistics, registration and methods of tabulation.
10. Offensive and dangerous trades.

COURSE IN PUBLIC HYGIENE. (See page 525.)

ORIGINAL INVESTIGATION. In addition to the foregoing set courses, facilities are offered by the Laboratory for special work. Students and graduates of this school or elsewhere will find opportunities for advanced work in any of the subjects properly coming within the scope of the Laboratory. Arrangements for such work can be made by correspondence with the Director of the Laboratory.

PHYSIOLOGICAL CHEMISTRY.

ALONZO ENGLEBERT TAYLOR, M.D. .. BENJAMIN RUSH *Professor of Physiological Chemistry.*

GEORGE H. MEEKER, PH.D., SC.D., LL.D.... *Professor of Chemistry.*

R. L. STEHLE, PH.D.	}	Instructors in Physiological
B. M. HENDRIX, PH.D.	}	Chemistry.

FIRST YEAR.

	Hours
LECTURES. <i>Professor Taylor.</i> —Four times a week, first half year	64
LABORATORY. <i>Professor Taylor, Drs. Stehle and Hendrix.</i> —Two and a half hours, four times a week, first half year...	160
RECITATIONS. <i>Drs. Stehle and Hendrix.</i> —Four times a week, first half year	64

Instruction in Physiological Chemistry is given during the first year of the medical course. Since all students enter the department with collegiate chemistry and physics, the work of the course in physiological chemistry is confined to organic and strictly physiological chemistry. Following a brief survey of the field of organic chemistry, the course of instruction comprises a systematic survey of the field of physiological chemistry, particular attention being devoted to metabolism. The viewpoint of the course is physiology, interpreted from the modern concepts of physics and chemistry. Especial attention is paid to the instruction in analysis, in order that

the future physician may be properly equipped to judge and to use approved physical and chemical methods in the investigation of morbid physiology.

The research laboratories of the department are open to workers qualified to undertake original investigations in physiological chemistry.

Graduate Work: Qualified students may elect physiological chemistry, in accordance with the regulations of the Graduate Council.

PHYSIOLOGY.

EDWARD T. REICHERT, M.D., Sc.D..*Professor of Physiology.*

EDWARD LODHOLZ, M.D.....*Assistant Professor of Physiology.*

E. L. PORTER, Ph.D.*Instructor in Physiology.*

J. GARRETT HICKEY, M.D., D.D.S..*Assistant in Physiology.*

Of the following courses in Physiology, I to VII, inclusive, are required of candidates for the degree of Doctor of Medicine. Courses VIII to XII are not required, but may be taken by students who have had satisfactory preparatory training.

SECOND YEAR.

Hours

I and II. LECTURES. *Professor Reichert*—Four times a week 128

III, IV, V and VI. LABORATORY. *Professor Reichert, Assistant Professor Lodholz, and Dr. Porter.*—Two and a half hours, three times a week 240

VII. CONFERENCES. *Dr. Porter.*—In sections. Once a week, for each student 32

The instruction in Physiology embraces systematic courses of lectures, practical work by the student, demonstrations and conferences given during and extending throughout the second year. The students, therefore, before entering upon their work in this department, have been trained in Physiological Chemistry, Anatomy and Normal Histology.

I and II. LECTURES. On the general subject of Nutrition, from the last Monday in September to February 1, and on the Heat Mechanism and the Nervous and Muscular Systems, from February 1 to the end of the session.

The lectures are copiously illustrated by tables, charts, diagrams and drawings, this being supplemented and considerably extended by the courses of instruction in the demonstration-room and laboratory.

III. STUDENTS' LABORATORY WORK, IN ILLUSTRATION AND EXTENSION OF COURSE I.

IV. STUDENTS' LABORATORY WORK, BEARING A SIMILAR RELATION TO COURSE II.

The course of practical work has been carefully and systematically planned, chiefly upon the *inductive* method of instruction, and seven and a half hours a week are assigned to each student for this work, together with demonstrations and conferences. The main objects sought in the laboratory are: the illustration of the lectures by the most impressive methods; the supplementation of collateral work to further impress important fundamental facts and broaden their application; the training in the use of instruments of precision, with especial reference to the use of apparatus in clinical and experimental medicine; the cultivation of the individual's power of observation and deduction; the encouragement of accuracy of expression and method, of collateral work, and the co-ordination of facts.

The instruction in the practical work is given under the direction of the Professor of Physiology by the Assistant Professor and the Instructors. Each student is assigned a table and the necessary apparatus, and works under the direct supervision of the teaching staff. He is directed in technique and in what to observe, but he is self-dependent as to his results and conclusions, which he must present for examination in the form of "graphic records" and written records at the end of each exercise.

V and VI. DEMONSTRATION. *Assistant Professor Lodholz and Dr. Porter.*—Two corresponding series of demonstrations, which take the place of practical work when the latter is of a character too difficult or otherwise undesirable for the student to pursue; as for instance, work involving the use of complicated or very expensive apparatus, the employment of mammals, etc. These demonstrations are given in their proper relation to other instruction in physiology.

VII. CONFERENCES. *Dr. Porter.*—Conferences which cover the subject-matter of the lectures are held weekly, and examinations monthly.

VIII. JOURNAL CLUB. Recent work in Physiology is reported by the members of the department, and by those actively engaged in research and advanced work in the laboratories.

IX. SEMINAR. Problems under investigation in the department are introduced for the mutual advantages of discussion. Conducted by Professor Reichert and the staff of the department.

X. GRADUATE COURSES. *Professor Reichert*.—These courses are arranged to suit the requirements of those presenting themselves for the work. Rooms and apparatus are placed at the disposal of such students, and every facility is offered for the prosecution of research.

XI. ELECTIVE COURSES IN ADVANCED PHYSIOLOGY. *Professor Reichert*.—These are offered to students of the third and fourth years in Medicine. The intention is to give to those who may desire it an opportunity to continue the laboratory work of the previous year in ways that are impossible with large classes, and as a foundation for the prosecution of research.

XII. RESEARCH. The laboratory offers all the advantages of its facilities and equipment for the investigation of problems in Physiology. This may be arranged for at any time by communicating with Professor Reichert.

PATHOLOGY.

ALLEN J. SMITH, M.D.....	<i>Professor of Pathology.</i>
JOSEPH MCFARLAND, M.D.....	<i>Professor of Pathology.</i>
PAUL A. LEWIS, M.D.....	<i>Assistant Professor of Pathology.</i>
JOHN A. KOLMER, M.D.....	<i>Assistant Professor of Experimental Pathology.</i>
ROBERT A. KEILTY, M.D.....	<i>Instructor in Pathological Histology.</i>
F. D. WEIDMAN, M.D.....	<i>Instructor in Gross Morbid Anatomy.</i>
DAMASO RIVAS, M.D.....	<i>Acting as Instructor of Pathological Histology in Classes at Seventeenth and Cherry Streets.</i>
BALDUIN H. LUCKE, M.D.....	<i>Instructor in Drawing.</i>
ERWIN F. FABER	<i>Assistant Instructor in Pathology.</i>

SURGICAL PATHOLOGY.

JOHN SPEESE, M.D.....	<i>Instructor in Surgery and in Surgical Pathology.</i>
HENRY P. BROWN, JR., M.D.....	} <i>Assistant Instructors in Surgical Pathology.</i>
BENJAMIN F. BUZBY, M.D.....	

NEUROPATHOLOGY.

WILLIAM G. SPILLER, M.D.....*Professor of Neurology.*

ALFRED R. ALLEN, M.D..... }
S. D. LUDLUM, M.D..... } *Associates in Neuropathology.*

SAMUEL LEOPOLD, M.D..... }
WILLIAMS B. CADWALADER, M.D., } *Instructors in Neuropathology.*

GYNECOLOGIC PATHOLOGY.

JOHN G. CLARK, M.D.....*Professor of Gynecology.*

CHARLES C. NORRIS, M.D..... }
GEORGE W. OUTERBRIDGE, M.D.... } *Assistants in Gynecological Pathology.*

OPHTHALMIC PATHOLOGY.

GEORGE E. DE SCHWEINITZ, M.D..*Professor of Ophthalmology.*

HAROLD W. HOW, M.D.....*Assistant in Ophthalmic Pathology.*

OTOLOGIC PATHOLOGY.

B. ALEXANDER RANDALL, M.D....*Professor of Otology.*

RALPH BUTLER, M.D.....*Assistant in Otological Pathology.*

DERMATOLOGIC PATHOLOGY.

M. B. HARTZELL, M.D.....*Professor of Dermatology.*

—, —,*Assistant in Dermatological Pathology.*

Instruction in Pathology extends over the four years of the medical curriculum. The plan of instruction embraces a general course in pathology under the direct supervision of the chair of pathology, and a group of courses of applied special pathology, limited to the third or fourth year, in charge of the staff of instructors of the clinical branches concerned. In this latter group, which looks eventually toward the presentation of all special applications advantageously taught by laboratory methods, there have thus far been organized laboratories of Surgical Pathology, Neuropathology, Gynecologic Pathology, Ophthalmic Pathology, Otologic Pathology, and Dermatologic Pathology. In each division of the subject except the last four named, the plan of teaching includes systematic lectures, demonstrations and practical class exercises.

The general instruction in pathology includes the following courses, of which I to IX, inclusive, are required of candidates for the degree of Doctor of Medicine:

FIRST YEAR.

Hours

- I. LECTURES ON AETIOLOGY WITH ESPECIAL CONSIDERATION OF ANIMAL PARASITES. *Professor Smith*.—Once a week, second half year 16

SECOND YEAR.

During the session 1916-17 the work of the second year in the Medico-Chirurgical section of the class is in charge of Professor Joseph McFarland, with Dr. Damaso Rivas acting as instructor.

- II. LECTURES. *Professor Smith*.—Three times a week for eight weeks; four times a week for twenty-four weeks..... 120
- III. DEMONSTRATIONS AND CONFERENCES. *Professor Smith*.—One and a half hours, once a week, for twenty-four weeks 36
- IV. LABORATORY. *Pathological Staff*.—Two and a half hours, three times a week..... 140

THIRD YEAR.

- V. DEMONSTRATIONS IN GROSS MORBID ANATOMY. *Pathological Staff*.—Two hours, once a week..... 64
- VI. AUTOPSIES. Each student must by the State Law attend at least six, but as a matter of fact each student attends from fifteen to twenty. In small sections.
- VII. NEUROPATHOLOGY. *Professor Spiller and Drs. Allen, Ludlum, Leopold and Cadwalader*.—In sections. Two hours a week, once a week for eight weeks, for each student..... 16
- VIII. CLINICAL PATHOLOGY. See under Medicine.

FOURTH YEAR.

- IX. DEMONSTRATIONS IN SURGICAL PATHOLOGY. *Dr. Speese, and Assistants*.—In sections. Two hours, once a week, for ten weeks, for each student..... 20
- X. ADVANCED WORK.
- XI. GYNECOLOGIC PATHOLOGY. *Dr. C. C. Norris*.
- XII. OPHTHALMIC PATHOLOGY.
- XIII. OTOLOGIC PATHOLOGY. *Dr. Ralph Butler*.
- XIV. DERMATOLOGIC PATHOLOGY.

Course I is devoted to the general discussion of elementary pathology and the causes of disease. The greater part of the time allotted is given to an outline of animal parasitology.

Courses II, III and IV are devoted to the various retrograde and progressive elementary pathological processes, to regeneration, inflammation, the specific inflammations, tumor formation and to teratology. In the laboratory of pathological histology, each student devotes three periods of two and one-half hours each week to the study of illustrative tissues by the microscope, the gross features of the processes discussed being correlated by frequent demonstrations of material in the laboratory or in lectures. The projection microscope is employed as an additional means of demonstration of the histological preparations, the essential features of each lesion being pointed out upon the screen to the student at the beginning of the study period.

Instruction in the special pathology of the various organs, with particular reference to the pathological physiology of each and the development of symptoms of disease, is taken up systematically in lectures in the second half of the second year; and in the laboratory of pathological histology the minute changes of the more important diseases of each organ are studied in as close relation as possible with the lecture instruction. At the same time brief demonstrations of the gross appearances of the diseased organs are made; and whenever profitable experimental work is introduced for the elucidation of special problems. A brief course, largely demonstrative and individual, upon the principles of immunity and serum diagnosis is included in this course.

In Course V during the third year each student studies the accumulated autopsy material and especially selected and museum preparations, systematically and by the "case" method.

In Course VI the class is divided into small sections, and as autopsies are being performed in the University Hospital and Philadelphia General Hospital, the students are required to attend, and participate in the work. In the fourth year the students of the various ward classes in the University Hospital attend the autopsies upon those subjects with whose clinical course each class has been familiar in the wards; special instruction, attempting to correlate the pathological findings with the known symptoms of the case in life, being given. Opportunity for the completion of such investigation by histological and bacteriological methods is afforded the student in the laboratories of the department.

VII. NEUROPATHOLOGY. See also Neurology.

VIII. CLINICAL PATHOLOGY. See under Medicine.

IX. SURGICAL PATHOLOGY. See also Surgery.

Dr. Speese.—Demonstrations of charts, gross specimens and microscopic specimens. This course is supplemental to Dr. Müller's lectures, and aims to present specimens illustrative of the principal surgical diseases. The following subjects are among those demonstrated; repair of wounds, suppuration, abscess, gangrene, ulcer, fistula, sinus, diseases of the thyroid, salivary and mammary glands; repair after fracture, diseases of bones, joints, ligaments, bursæ; disease of the digestive tract, including the lip, tongue, stomach, gall bladder, liver, pancreas, intestine, appendix and rectum; diseases of the kidney, ureter, bladder, prostate, penis, scrotum and testicle; tumors about the jaw, connective tissue tumors, epithelial skin tumors; diseases of the lymphatic system.

X. ADVANCED WORK. With the increased space and added facilities afforded by the McManes Laboratory of Pathology the department offers to advanced and post-graduate students special instruction in experimental pathology, immunology and serum diagnosis, animal parasitology, pathological histology, museum and autopsy work; and opportunity is afforded those suitably trained to undertake special investigation.

In addition to the above, work is presented by the various clinical groups in the special departments of the McManes Laboratory of Pathology (the Courses XI, XII, XIII and XIV, however, are not given the undergraduate classes).

PHARMACOLOGY.

ALFRED N. RICHARDS, PH.D.....	<i>Professor of Pharmacology.</i>
HORATIO C. WOOD, JR., M.D.....	<i>Professor of Pharmacology and Therapeutics.</i>
OSCAR H. PLANT, M.D.....	<i>Assistant Professor of Pharmacology.</i>
ARTHUR H. HOPKINS, M.D.....	<i>Instructor in Practical Therapeutics.</i>

Instruction in pharmacology is given during the second and third years and is required of all candidates for the degree of Doctor of Medicine.

SECOND YEAR.

	Hours
LECTURES. <i>Professor Richards.</i> —Twice a week.....	64
CONFERENCES. <i>Assistant Professor Plant.</i> —In sections. Once a week, for each student.....	32

	Hours
LABORATORY COURSE IN MATERIA MEDICA AND PHARMACY. <i>Professor Richards, Assistant Professor Plant.</i> —In sections. Two and a half hours, twice a week, for eight weeks, November 23 to January 23, for each student.....	40
LABORATORY COURSE IN PHARMACOLOGY. <i>Professor Richards, Assistant Professor Plant.</i> —In sections. Two and a half hours, once a week, second half year, for each student.....	40

THIRD YEAR.

PRACTICAL THERAPEUTICS. <i>Dr. Hopkins.</i> —In sections. One and a half hours, once a week, for twenty-four weeks, December 1 to June 1, for each student.....	36
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SECOND YEAR. In the lectures the physiological action of the important drugs is systematically considered, emphasis being laid upon those features in action which are of importance in relation to therapeutic use or toxicological effect.

The conferences are devoted to informal discussion of the subjects studied in lectures and text-book.

The laboratory work of the first half year includes the practical study of the general physical and chemical properties of the active constituents of drugs; practice in pharmaceutical methods of manufacture, at least one sample of each type of pharmacopœial preparations being made by each student; the study of incompatibilities and of prescription compounding. Together with this work in the laboratory the subject of prescription writing is taken up, the student being required to write each week a number of prescriptions including substances and preparations already studied in the laboratory. A portion of each laboratory period is devoted to criticism of these prescriptions with demonstrations.

The laboratory work of the second half year is devoted to the practical study of drug action. Each section of the class is subdivided into groups of two, three or four students as occasion demands, and each of these smaller groups, under adequate supervision, performs experiments which demonstrate the action exerted by drugs upon the important physiological mechanisms—nervous system, respiration, circulation, kidney, gastro-intestinal tract, etc. Important experiments which cannot be successfully performed by students are shown in demonstration.

THIRD YEAR. PRACTICAL THERAPEUTICS. In this course pharmacology is studied in relation to definite problems in the treatment

of disease. Cases from the medical wards of the University Hospital are presented in clinic, the important features in the history and physical examination are briefly discussed and the student is required to plan drug treatment based, in so far as is possible, upon the known action of the drugs which might be chosen and the nature of the conditions to be treated, and to write the prescriptions and instructions covering it. These outlines and prescriptions are critically discussed in the light of the results of the treatment which was actually applied, and from time to time, the cases again are brought before the class for further observation and discussion as to progress and modification of treatment.

Owing to the merger between the University of Pennsylvania and the Medico-Chirurgical College and differences between the curricula of the two schools, third-year students whose first two years have been spent in the latter institution receive instruction in Pharmacology and Therapeutics for four hours a week during the first half year. This course is conducted by Professor Horatio C. Wood, Jr.

RESEARCH. The research laboratories of the department are open to a limited number of qualified workers. Research in pharmacology may be chosen by students of the fourth year in fulfillment of the elective requirements of that year.

TOXICOLOGY.

JOHN MARSHALL, M.D....*Professor of Chemistry and Toxicology.*

LEON A. RYAN, PH.D.....*Assistant Professor of Chemistry and Toxicology.*

HOWARD L. MARSH, M.S....*Instructor in Chemistry.*

SECOND YEAR.

LECTURES.	<i>Professor Marshall.</i> —Once a week, second half year	16
LABORATORY.	<i>Professor Marshall, Assistant Professor Ryan and Mr. Marsh.</i> —Two and a half hours, once a week, second half year	40

The laboratory course includes principally the application of qualitative chemical tests to individual poisons and also their separation, and identification, from food stuffs and animal tissues. The identification of blood stains on fabrics, etc., is also part of the course. Especial attention is devoted to the medico-legal aspects of the subject.

SECOND YEAR.

Hours

LECTURES AND DEMONSTRATIONS ON PHYSICAL DIAGNOSIS.	
<i>Assistant Professor Norris.</i> —Once a week, second half year	16
PRACTICAL WORK IN PHYSICAL DIAGNOSIS. <i>Assistant Professor Norris and Assistants.</i> —In sections. Two hours a week, for second half year, for each student.....	32

THIRD YEAR.

LECTURES. <i>Professor Stengel.</i> —To third- and fourth-year classes combined. Once a week.....	32
CLINICAL LECTURES. <i>Professor Stengel.</i> —Once a week	32
OBSERVATION CLASSES. <i>Dr. Stevens.</i> —Once a week, first half year	16
PRACTICAL WORK IN MEDICAL DISPENSARY. <i>Dr. Musser and Assistants.</i> —In sections. For each student.....	80
PRACTICAL WORK. One hour a week for second half year.....	16
LECTURES ON APPLIED THERAPEUTICS. <i>Professor Fussell.</i> —Twice a week.....	64
MEDICAL CLINICS. <i>Drs. Austin and O. H. P. Pepper.</i> —Once a week	32
LECTURES ON CLINICAL PATHOLOGY. <i>Assistant Professor Wm. Pepper.</i> —Once a week	32
LABORATORY COURSE IN CLINICAL PATHOLOGY. <i>Assistant Professor Pepper, Drs. Cope and Leopold.</i> —In sections. Two hours a week for each student.....	64
LECTURES ON DIETETICS OF THE SICK. <i>Dr. Stahl.</i> —Once a week, second half year	16
EXTRAMURAL CLINICS. Philadelphia General and Pennsylvania Hospitals on Saturday mornings.	

FOURTH YEAR.

LECTURES. <i>Professor Stengel.</i> —To third and fourth year classes combined. Once a week	32
CLINICAL CONFERENCES. <i>Professors Stengel, Riesman and Sailer.</i> —Three times a week.....	112
WARD CLASSES. <i>Drs. Stevens, Stahl and Allyn.</i> —Philadelphia General Hospital. In sections. For three weeks, for each student	8
WARD WORK. <i>Professor Stengel, Drs. Austin and Pepper.</i> —University Hospital. In sections. For five weeks, for each student	140

	Hours
WARD WORK. <i>Professors Riesman and Sailer, Drs. Farr and Piersol.</i> —Philadelphia General Hospital. For five weeks, for each student	75
WARD WORK. <i>Assistant Professor Landis, Drs. Cruice, Craig and Montgomery.</i> —Phipps Institute. In sections. For ten weeks, for each student	30
APPLIED THERAPEUTICS. <i>Professor Fussell.</i> —In sections. Twice a week, for five weeks, for each student.....	10

OUTLINE.

SECOND YEAR.

PHYSICAL DIAGNOSIS.—*Dr. Norris* gives lectures and demonstrations on physical diagnosis during the second half of the year. These are devoted to an exposition of the general principles of the subject rather than to a study of the physical signs in special diseases.

In addition to the lectures, each student has practical work under *Dr. Norris* and his assistants, the class being divided into small sections. These classes are devoted almost entirely to normal conditions, the signs of disease being used only as an occasional contrast to the normal, the actual study of signs of special diseases being carried out in the third year.

THIRD YEAR.

SYSTEMATIC LECTURES.—*Professor Stengel* lectures to the third- and fourth-year classes combined, once a week. These lectures are intended as a general exposition of the relations of the fundamental sciences to practical medicine with a sufficient systematic description of diseases to furnish a basis for further study. In addition to the lectures, topics for reading are assigned, so that the student may be guided in his work.

CLINICAL LECTURE.—*Professor Stengel* also conducts for the third-year class once a week, a medical clinic illustrating the topics discussed in the general lecture.

OBSERVATION CLASSES.—*Dr. Stevens* conducts these classes, with the special purpose of training the student's powers of observation in recognizing the meaning of the objective signs of disease.

MEDICAL DISPENSARY.—The class is divided into small sections and assigned to the Instructors in the Medical Dispensary—*Dr. Musser and his Assistants*. The students take histories of new cases, make physical examinations and assist in the work of the Dispensary. Demonstrations of selected cases are made by the In-

structors and various methods of clinical investigation are carried out with the assistance of the students.

One hour each week the whole class divided into three sections meets Drs. Piersol, Goodman and Musser in the Medical Dispensary for special demonstrations designed to aid them in their individual work just described.

Besides the regular work, many students avail themselves of the opportunities offered to act as clerks in the Dispensary of the University Hospital throughout the year, and in the same place or elsewhere during vacations.

APPLIED THERAPEUTICS.—*Professor Fussell* lectures with illustrative cases as the basis of discussion of methods of treatment. All forms of medical and non-medical therapeutics are discussed and as far as possible demonstrated before the students.

MEDICAL CLINICS.—*Drs. Austin and O. H. P. Pepper* conduct clinics at the University Hospital. These are designed to advance the clinical experience of the students after the systematic lectures and dispensary work have prepared them for further clinical work.

CLINICAL LABORATORY COURSE.—*Dr. William Pepper* gives a lecture and demonstration, and with Drs. Cope and Leopold conducts the laboratory exercises. In these the class is divided into sections, each section receiving instruction and practice on the methods of chemical and microscopical examination of the urine, blood, sputum, stomach contents, feces, etc.

DIETETICS OF THE SICK. *Dr. B. Franklin Stahl.*—Lectures are given with the purpose of providing the students an understanding of foods and their composition and preparation, and demonstrations are held on the methods of preparing various foods suitable for different individuals, the demonstrations being made sufficiently elementary to be readily comprehended and remembered, and to illustrate the influence of cooking upon the food selected. The dietetic treatment of the various diseases is later taken up. The diet in disease is illustrated by showing trays of foods prepared for patients suffering from diseases under consideration, and thus practical lessons are provided exhibiting the variety of diet that may be secured from a limited number of food materials.

FOURTH YEAR.

SYSTEMATIC LECTURES. (See Third Year.)

CLINICAL CONFERENCES.—*Professors Stengel, Riesman and Sailer* take up, in a systematically subdivided course, the discussion of all the important medical conditions, so that the whole subject may be

illustrated so far as this is feasible—dangerously contagious diseases and others that do not occur in this region being, of course, excepted.

In these conferences, held both in the University and the Philadelphia Hospitals, students who have studied the cases in the wards are called to the bedside before the class and discuss the cases with the lecturer, and at times contribute short papers on specially assigned subjects.

In all the above classes the students in charge of the case are required to report completely on the case in hand, including the history and general examination and any desirable clinical laboratory findings, the examination of the blood and urine being always required.

The conferences deal especially with questions of diagnosis or treatment.

WARD CLASSES.—*Drs. Stevens, Stahl and Allyn* meet sections three times weekly at the Philadelphia Hospital in advanced ward classes which deal especially with differential diagnosis and treatment.

WARD WORK. The medical ward work is arranged in periods of five weeks' continuous service in the medical ward at the University Hospital, five weeks at the Philadelphia Hospital and ten weeks at the Phipps Institute. At the latter place the work is subdivided into a period in the wards studying non-tuberculous subjects under Dr. Craig, work in the Dispensary on cases of varied character under Drs. Landis and Montgomery, attendance at "tuberculosis classes" under Dr. Landis, and a period of service outside in the social work of the Institute in which the student has opportunity to meet some of the problems of home treatment as regards general hygiene, diet, occupation and various other practical problems of treatment, especially among the poor. In addition to the remarkable opportunities for studying chest disorders especially, that the Phipps Institute affords, a striking collection of anatomical and pathological preparations has been provided there which greatly illuminate questions of chest diagnosis.

Professor Fussell meets small sections for bedside discussion of practical therapeutics.

At the University Hospital there are regular ward rounds on five days of the week by Professor Stengel and Drs. J. H. Austin and O. H. P. Pepper, and at the Philadelphia Hospital by Professors Riesman and Sailer, and Drs. Farr and Piersol. Some or all of these teachers are in the wards practically all of each morning, and the students are thus under supervision constantly, and advice is

always at hand; but their work is done by themselves and at the ward rounds reports are made to the instructor of the nature, progress, etc., of each case by the student assigned to it, each student having several cases under his care. The group have opportunity to see all special kinds of treatment practiced in the ward and to follow, and to some extent to suggest, the treatment of the cases under observation.

Each student thus gets three months' experience in the medical wards, working three to five hours daily, which is comparable to that of a hospital interne, with the addition of constant aid and advice from senior instructors.

LABORATORY WORK. Each student of the fourth-year class is supplied with a working place in the Clinical Laboratory, which is immediately adjacent to the hospital wards, where he is furnished with a locker containing all necessary apparatus. He is required to make routine examinations, in which assistance is available when needed, of all material from patients assigned to him in any of the departments during his final year. The laboratory is open at all times during the day, and the student has access to his working place at any leisure time for such work, or for any other laboratory work that he may desire to carry out. At the Phipps Institute laboratory facilities are provided for the students working there.

OTHER EXTRAMURAL TEACHING. The roster is arranged so that the students of the third-year class are free to attend the medical clinics at the Pennsylvania or Philadelphia Hospitals on Saturdays. Other medical clinics may also be attended by the members of the same class, and volunteer work in connection with various other hospitals is easily secured, particularly during vacation.

CLINICO-PATHOLOGICAL DEMONSTRATIONS. All autopsies held at the University Hospital will be attended by the students on duty in the ward in which the case under examination occurred. The pathologist conducts the autopsy, the clinicians in charge of the case first explaining the clinical aspects of the condition.

PEDIATRICS.

J. P. CROZER GRIFFITH, M.D.....	<i>Professor of Pediatrics.</i>
THOMPSON S. WESTCOTT, M.D.....	} <i>Associates in Pediatrics.</i>
MAURICE OSTHEIMER, M.D.....	
CHARLES A. FIFE, M.D.....	} <i>Instructors in Pediatrics.</i>
HOWARD C. CARPENTER, M.D.....	
J. CLAXTON GITTINGS, M.D.....	

THIRD YEAR.

Hours

LECTURES. <i>Drs. Ostheimer, Fife, Carpenter and Gittings.</i> —Once a week for second half year.....	16
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FOURTH YEAR.

LECTURES. <i>Professor Griffith.</i> —Once a week	32
WARD CLASSES AND DISPENSARY WORK. <i>Drs. Ostheimer, Fife and Carpenter.</i> —In sections. Five times a week, for each student	30
WARD WORK. <i>Drs. Fife, Carpenter and Gittings.</i> —In sections. Two hours a week, for five weeks, for each student.....	10

The course in Pediatrics consists of lectures, ward classes and ward work in the University Hospital and the Philadelphia Hospital.

The lectures are conducted by the Professor of Pediatrics in the medical amphitheatre of the University Hospital once a week. Special lectures are given upon the general diagnosis, symptomatology and treatment of disease in children. The more important subjects receive systematic and full discussion, among these being such topics as pneumonia of childhood, gastrointestinal diseases, typhoid fever in infancy and childhood, forms of paralysis, the feeding of infants, etc., etc. In addition to these, the Children's Ward and Dispensary are drawn upon for clinical lectures on the various diseases presenting themselves.

The ward classes are conducted at the University Hospital by Dr. Ostheimer, and at the Philadelphia Hospital by Drs. Carpenter and Fife. Subsections of the class, consisting of from eight to fifteen students, attend these ward classes three times a week and have the opportunity of examining the patients under the direction of the instructor, and in addition learn the practical management of the diseases of children as conducted in the Hospital wards. In addition to the work mentioned, the students, in small groups, are assigned personal supervision of certain cases in the wards in the University Hospital, making daily observations of them and attending the ward visits of the assistant pediatric physicians, Drs. Ostheimer, Gittings, Fife and Carpenter.

PHYSICAL THERAPY.

R. TAIT MCKENZIE, B.A., M.D.....*Professor of Physical Therapy.*

Instruction in this subject consists of a course of lectures upon the application of massage, hydrotherapy, heat and light, in the treatment of disease.

These lectures begin in November and are given twice a week during the term at the Medical laboratories or the University Hospital to members of the second-year class.

The practical work and demonstrations are given in the Department of Physical Therapy in the University Hospital.

SECOND YEAR.

	Hours
LECTURES AND DEMONSTRATIONS ON PHYSICAL THERAPY. <i>Professor McKenzie</i> .—One hour, twice a week, for twelve weeks	24
DEMONSTRATIONS ON HYDROTHERAPY AND THERMOTHERAPY. <i>Dr. Nylin</i> .—In sections. Six hours for each student, included in above twenty-four hours.	

SURGERY.

EDWARD MARTIN, M.D.....	JOHN RHEA BARTON	<i>Professor of Surgery.</i>
JOHN B. DEAVER, M.D.....		<i>Professor of the Practice of Surgery.</i>
CHARLES H. FRAZIER, M.D.....		<i>Professor of Clinical Surgery.</i>
HENRY K. PANCOAST, M.D.....		<i>Professor of Roentgenology.</i>
ALFRED C. WOOD, M.D.....		<i>Assistant Professor of Surgery.</i>
J. EDWIN SWEET, M.D.....		<i>Assistant Professor of Surgical Research.</i>
RICHARD H. HARTE, M.D.....	}	<i>Adjunct Professors of Surgery.</i>
JAMES P. HUTCHINSON, M.D...		
JOHN B. CARNETT, M.D.....	}	<i>Associates in Surgery.</i>
JOHN H. JOPSON, M.D.....		
GEORGE P. MÜLLER, M.D.....		
T. TURNER THOMAS, M.D.....		
JOHN SPEESE, M.D.....	}	<i>Instructors in Surgery.</i>
BENJAMIN A. THOMAS, M.D....		
GEORGE G. ROSS, M.D.....		
DAMON B. PFEIFFER, M.D.....		
A. P. C. ASHHURST, M.D.....		
ELDRIDGE L. ELIASON, M.D.....		
GEORGE M. LAWS, M.D.....		

JOHN BUSCH, M.D.....	} Assistant Instructors in Surgery.
CHARLES F. MITCHELL, M.D....	
W. F. GUILFOYLE, M.D.....	
J. C. BIRDSALL, M.D.....	
NATHANIEL GINSBERG, M.D....	
FRANCIS G. HARRISON, M.D....	
THOMSON F. EDWARDS, M.D....	
RUTHERFORD L. JOHN, M.D....	} Assistant Instructors in Operative Surgery.
ALBERT L. USSET, M.D.....	
HENRY WINSOR, M.D.....	
H. P. BROWN, M.D.....	

SECOND YEAR.

	Hours
BANDAGING. <i>Dr. Busch</i> .—In sections. Second half year, one hour a week, for each student.....	16

THIRD YEAR.

LECTURES. <i>Professor Martin</i> .—Twice a week.....	64
<i>Dr. Müller</i> .—Once a week.....	32
LECTURES AND DEMONSTRATIONS. <i>Assistant Professor Wood assisted by Drs. Eliason, Busch and Guilfoyle</i> .—Once a week	32
<i>Dr. Ross or Dr. Eliason</i> .—Once a week.....	32
CONFERENCES. <i>Dr. Carnett</i> .—Once a week	32
<i>Dr. Jopson</i> .—Once a week	16
PRACTICAL WORK. One hour a week for second half year....	16
CLINICS. Philadelphia and Pennsylvania Hospitals.	

FOURTH YEAR.

LECTURES. <i>Professor Martin</i> .—Once a week for first half of year; twice a week second half of year	48
CLINICAL CONFERENCES. <i>Professor Martin</i> .—In sections. One-third of class. Two hours a week, for ten weeks, for each student	20
<i>Professor Frazier</i> .—Once a week	32
OPERATING CLINICS. <i>Professor Martin</i> .—University Hospital. In sections. Two-ninths of class. Two hours, once a week, for three and a half weeks, for each student.....	7
<i>Professor Deaver</i> .—University and German Hospitals. In sections. One-third of class. Three hours a week, for ten weeks, for each student	30
<i>Professor Frazier</i> .—University Hospital. In sections. Two-ninths of class. Two hours, once a week, for five weeks, for each student	10

	Hours
WARD CLASSES. <i>Drs. A. C. Wood, Pfeifer and Ross.</i> —Subsections aggregating three hours a week, for nine weeks, for each student	27
WARD WORK. <i>Drs. Carnett, Müller and Eliason.</i> —Subsections aggregating five hours a week, for three weeks, for each student	15
APPLIED SURGICAL ANATOMY. <i>Dr. T. T. Thomas.</i> —In sections. One-third of class. Once a week, for ten weeks, for each student	10
MINOR OPERATIONS AND SURGICAL PROCEDURES. <i>Dr. G. M. Laws.</i> —In sections. One-third of class. Two hours a week, for ten weeks, for each student.....	20
OPERATIVE SURGERY. <i>Drs. Jopson, Eliason, Laws, Speese and H. P. Brown, Jr.</i> —In sections. Two and a half hours, once a week, for ten weeks, for each student.....	25
SURGICAL PATHOLOGY. (See under Pathology.)	
DISPENSARY SERVICE. Intramural or Extramural.—One-ninth of class, three hours a week, for three and one-third weeks (10 hours). Supplemented by work in vacation periods. For each student	24

The course in Surgery, beginning in the latter half of the second year and extending throughout the third and fourth years—is conducted by the Professor of Surgery, Professor of Practice of Surgery, Professor of Clinical Surgery, Professor of Roentgenology, Assistant Professor of Surgery, two Adjunct Professors, an Assistant Professor of Surgical Research, four Associates in Surgery and a corps of clinical instructors.

The course, which includes instruction in the principles and practice of surgery, in surgical pathology, in applied surgical anatomy, in practical minor surgery, in operative surgery and in bedside, dressing room and dispensary practice, is so planned that the subject may be systematically covered in both theory and, in so far as this is practicable, in practice. The methods of teaching are designed to demonstrate to the student the clinical value of those fundamental branches of medical science upon which he has spent the first two years of his course, to develop his powers of observation, to familiarize him with the principles underlying treatment and to enable him, under supervision and subject to skilled criticism, to make practical application of his knowledge in the wards, the dispensaries, the clinical conferences and the operating room. Before graduation each

student is required to have administered a general anæsthetic under skilled supervision to at least six patients.

BANDAGING. *Dr. Busch.*—In the second half of the second year, the students are given individual instruction in the fundamental principles underlying the use of the bandage and in its practical application, this drill being continued until each man is sufficiently expert to become serviceable in dispensary practice and ward work.

SYSTEMATIC LECTURES. *Professor Martin.*—Two hours a week to the third-year class. One hour a week for first half year; two hours a week for second half of year, to the fourth-year class.

Dr. Müller, one hour a week to the third-year class covering the general subjects of injury, infection and tumors, including wounds, hemorrhage, shock, embolism, cellulitis, abscess, ulcer, gangrene, peritonitis, etc., and benign and malignant tumors. The lectures are illustrated where possible by lantern slides and charts.

MINOR SURGERY. *Dr. Wood assisted by Drs. Eliason, Busch and Guilfoyle.*—In this course the following subjects are described and illustrated: Preparation for operation, including the various surgical dressings and materials employed and their application; Indications for drainage and methods for securing it; Hemorrhage; Shock; Fixed dressing; Adhesive plaster; External applications; Venesection; Transfusion; Hypodermoclysis; Proctolysis; Anesthesia; Sutures; Ligatures; Hypodermic injections; Aspirations; Tapping; Individual drill in fracture dressing.

MINOR OPERATIONS AND SURGICAL PROCEDURES. *Dr. G. M. Laws.*—One-third of the fourth-year class. The practical diagnosis and treatment of patients drawn from the Surgical Dispensary.

CLINICAL CONFERENCES. *Professor Martin,* two hours weekly with one-third of the fourth-year class.

Professor Frazier conducts a clinical conference for one hour weekly before the fourth-year class, at which are discussed major surgical topics. It is illustrated by patients, lantern slides and charts.

Dr. Carnett.—One hour each week before the third-year class; clinical study of cases by individual students with discussion and criticism.

Dr. Eliason, one hour a week for half the year to the third-year class. Especial attention is given to minor conditions requiring surgical treatment. Performance of minor operations by students.

Dr. Ross, one hour a week for half the year to third-year men, a clinical lecture following the lectures of the professor of surgery and the operations of the professor of the practice of surgery.

WARD WORK.—*Dr. Wood*, one hour a week to sections of the fourth-year class. Patients are discussed by individual students in regard to the etiology, pathology and diagnosis and treatment of the surgical affections which they exhibit.

Dr. T. Turner Thomas, one hour a week to one-third of the class in the clinical application of surgical applied anatomy.

WARD CLASSES. *Drs. Carnett, Müller, Eliason, Ross and Pfeiffer.*—Subsections of the class four hours a week for one-third of the term. Surgical patients are assigned to individual students; each student is required to make a complete physical examination with special reference to surgical lesions, carry out such special tests as are indicated, and follow the progress of each patient assigned to his care, keeping a written record of the results of bedside observation and study. Laboratory facilities are provided for each student so that he may examine the blood, feces and urine when this is required. X-rays are available when such pictures are needed. The student is directed and supervised in his work and is encouraged to make suggestions relative to the care and treatment of the patient. He assists at the operations performed upon patients under his charge and, under supervision, is permitted to dress the wounds.

OPERATING CLINICS. *Professor Martin.*—Two-ninths of the fourth-year class for two hours a week for one-third the term.

Professor Deaver, one-third the fourth-year class for three hours a week for one-third of the term. Special attention is given to surgical diseases of the abdomen and an opportunity is afforded to students assigned to a case to take part in the operation.

Professor Frazier, two-ninths of the fourth-year class for two hours a week for one-third the term.

OPERATIVE SURGERY. *Dr. Jopson, assisted by Drs. Eliason, Laws, Speese and Brown.*—The course comprises didactic instruction given to the third-year class and practical work upon the cadaver. The theory and technique are covered by a series of weekly lectures, the general principles of Operative Surgery being emphasized and the steps in the various operations illustrated by diagrams, lantern slides and demonstrations on the cadaver.

For the practical work the fourth-year class is divided into sections which work in the Laboratory of Operative Surgery performing the various operations upon cadavers under the supervision of Dr. Jopson and his assistants. Special attention is paid to the typical major operations, to those included under emergency surgery and to the acquirement by the student of facility in general operative technique.

AN ELECTIVE COURSE IN OPERATIVE SURGERY. *Dr. Ashhurst, assisted by Dr. Winsor.*—Open to the fourth-year men. This course is designed to give in fuller detail and with greater facilities than are provided in the general course operative practice upon the cadaver.

DISPENSARY SERVICE. *Dr. B. A. Thomas, assisted by Drs. Laws, Birdsall, Harrison and Edwards.*—One month of dispensary service is required of each student before graduation. In addition to the dispensary of the University Hospital, the Howard (*Dr. Eliason*) and the Pennsylvania Hospitals (*Dr. Mitchell*) are available. The student serves as an assistant, thus becoming familiar with the treatment of sprains, fractures, dislocations, wounds and surface infections which constitute the majority of affections attending an Out-patient Department. He is also given the opportunity to perform such minor surgical operations as naturally belong to such a service. The full service is usually made up voluntarily during vacation periods.

ROENTGENOLOGY. *Professor Pancoast.*—A series of lectures and demonstrations covering the diagnosis and therapeutic application of X-rays, and the interpretation of radiograms.

SURGICAL RESEARCH. *Dr. Sweet.*—This is an elective course open to a limited number of men of the third and fourth-year classes who by inclination and personal qualities show an especial fitness for the practice of surgery. The object of the course is to give such qualified men opportunity to practice the fundamental principles of surgery in work upon research problems which bear directly upon the betterment of surgical practice.

ORTHOPEDIC SURGERY.

G. G. DAVIS, M.D., M.R.C.S., Eng., LL.D.. *Professor of Orthopedic Surgery.*

JAMES K. YOUNG, M.D..... *Associate Professor of Orthopedic Surgery.*

WALTER G. ELMER, M.D.....	} <i>Instructors in Orthopedic Surgery.</i>
WILLIAM JACKSON MERRILL, M.D....	
DE FOREST P. WILLARD, M.D.....	
THOMAS A. O'HARA, M.D.....	} <i>Assistant Instructors in Orthopedic Surgery.</i>
W. ESTELL LEE	

The instruction in Orthopedic Surgery is confined to the fourth year for those who elect this subject.

I. CLINICAL INSTRUCTION. This course, largely operative, includes the surgical and mechanical treatment of congenital malformations, deficiencies and deformities; also of acquired distortions and deformities the result of disease or injury, joint and bone diseases, rickets, infantile spinal and cerebral paralysis, etc., etc.

II. WARD CLASS WORK. *Drs. Elmer, Merrill and Willard.*—Cases in the wards and dispensary are employed to perfect each student in personal diagnosis and treatment. Instruction is also given in the application of apparatus, plaster-of-Paris and corrective dressings; the construction of braces; the treatment of lateral curvature, paralysis, etc. Each student is expected personally to perform all the necessary manipulations.

A specially equipped orthopedic gymnasium connected with this department is in daily use for demonstrating methods for the correction of deformities and the development of muscular power.

III. WORK IN OUT-PATIENT DEPARTMENT. Dispensary work is continued daily throughout the year. Students desiring special practical work can arrange for certain periods in the Dispensary.

GENITO-URINARY SURGERY.

THOMAS R. NELSON, M.D.....*Professor of Genito-Urinary Surgery.*

E. HOLLINGSWORTH SITER, M.D.....*Instructor in Genito-Urinary Surgery.*

W. H. MACKINNEY, M.D.....	}	<i>Assistant Instructors in Genito-Urinary Surgery.</i>
J. LEON HERMAN, M.D.....		
ALEXANDER RANDALL, M.D.....		

FOURTH YEAR.

	Hours
LECTURES. <i>Professor Neilson.</i> —Once a week, first half year...	16
WARD CLASSES AND DISPENSARY WORK. <i>Professor Neilson and Assistants.</i> —In sections. Two hours, twice a week, for ten weeks, for each student	40

A systematic course of lectures is given, covering the surgical diseases and injuries of the genito-urinary organs, including the venereal diseases.

Ward classes, for which the class is divided into sections, are held throughout the year. The students are afforded excellent opportunity to become familiar with the methods of diagnosis and treatment of diseases of the genito-urinary apparatus by personal observa-

tion, and by practical work under the guidance of the teachers. House cases requiring operation are operated on by the professor before the class.

Subsections of the class for elective work receive instruction four times a week from Drs. Siter and Mackinney in the Venereal Wards of the Philadelphia Hospital and the Genito-Urinary Dispensary of the University Hospital. The rich and abundant material at hand offers to the student unsurpassed opportunities for observation and study.

GYNECOLOGY.

JOHN G. CLARK, M.D.....	<i>Professor of Gynecology.</i>
BROOKE M. ANSPACH, M.D.....	<i>Associate in Gynecology.</i>
CHARLES C. NORRIS, M.D.....	} <i>Instructors in Gynecology.</i>
FLOYD E. KEENE, M.D.....	
G. W. OUTERBRIDGE, M.D.....	} <i>Assistant Instructors in Gynecology.</i>
FRANK B. BLOCK, M.D.....	
THOMAS C. LLEWELLYN, M.D.....	

The instruction in Gynecology extends throughout the third and fourth years and comprehends:

THIRD YEAR.

	Hours
I. RECITATION AND LANTERN DEMONSTRATIONS. <i>Professor Clark.</i> —Once a week	32

FOURTH YEAR.

II. CLINICAL WARD CLASSES. <i>Professor Clark and Dr. Anspach.</i> —In sections. Two hours, three times a week, for ten weeks, for each student	60
III. CLINICAL CONFERENCE. <i>Drs. Norris and Keene.</i> —In sections. Once a week, for ten weeks, for each student.....	10
IV. GYNECOLOGICAL PATHOLOGY. <i>Dr. Outerbridge.</i> —This is an elective course for special students.....	
V. GYNECOLOGICAL DIAGNOSIS. <i>Drs. Llewellyn and Block.</i> —Elective course for limited number of students in Gynecological Dispensary.	

THIRD YEAR.

I. RECITATIONS AND LANTERN DEMONSTRATIONS. Devoted either to recitations or to lantern demonstrations by Professor Clark. It is intended that the demonstrations shall fully supplement the recita-

tions, thus rendering as clear as possible the histologic, anatomic, and pathologic, as well as the operative side of Gynecology. The third-year instruction is entirely theoretic, and is intended to prepare the student for his practical work for the fourth year.

FOURTH YEAR.

II. CLINICAL WARD CLASSES. The class is divided into sections, which attend the clinical ward classes. These sections are further subdivided into small groups of students who see all cases with the professor or instructors before any plan of treatment is instituted. The history of the case is carefully reviewed; and, instead of the usual clinical lecture preceding an operation, the special group of students for the day are closely quizzed on all points relative to diagnosis, treatment, and prognosis. Immediately after the operation, all points on the technique of the operation, the post-operative care of the patient, the possible complications, and the ultimate prognosis are fully considered.

III. CLINICAL CONFERENCE. During this Conference the clinical reporters for each ward class give in detail the histories of cases seen during the preceding week, with treatment and results. The instructor merely acts as a guide in these conferences, the students carrying the burden of the discussion.

IV. GYNECOLOGICAL PATHOLOGY. The Pathological Laboratory of the Gynecological Department will be placed at the disposal of elective students. A complete course in microscopic diagnosis will be offered. This will prove particularly valuable to those students, either undergraduate or postgraduate, who expect to take up the special study of the Diseases of Women.

V. GYNECOLOGICAL DIAGNOSIS. A limited number of students may elect this course. Comprehensive training in history taking, diagnosis, and treatment of ambulatory office cases will be given in the Gynecological Dispensary.

DERMATOLOGY.

MILTON B. HARTZELL, A.M., M.D., LL.D...*Professor of Dermatology.*
F. C. KNOWLES, M.D.*Instructor in Dermatology.*

THIRD YEAR.

	Hours
LECTURES. <i>Professor Hartzell.</i> —Once a week, first half year...	16
CLINICS. <i>Professor Hartzell.</i> —Half the class, one hour, once a week, for half the year	16
WARD INSTRUCTION. <i>Professor Hartzell and Dr. Knowles.</i> — In sections. One hour, once a week, for ten weeks.....	10

I. LECTURES. The subject-matter being descriptive of the commoner diseases of the skin as met with in this country. The lectures are abundantly illustrated by charts, paintings, photographs, lantern slides, and wax and papier-maché models.

II. CLINICS. A number of cases are exhibited and commented on in such a manner as to render the clinical features of the disease plain.

III. WARD INSTRUCTION. In the wards of the Philadelphia General Hospital and in the Skin Dispensary of the University Hospital, the students thus coming in contact with cases. This is also open to the fourth-year class as an elective.

OPHTHALMOLOGY.

GEORGE E. DE SCHWEINITZ, M.D.....*Professor of Ophthalmology.*

JOHN T. CARPENTER, M.D.....*Lecturer in Ophthalmology.*

EDWARD A. SHUMWAY, M.D.....

THOMAS B. HALLOWAY, M.D.....

H. MAXWELL LANGDON, M.D.....

CARL WILLIAMS, M.D.....

B. F. BAER, M.D.....

Instructors in Ophthalmology.

PRACTICAL WORK IN THE PHYSIOLOGICAL LABORATORY.—The second-year men are each provided with suitable appliances, an optical box, an ophthalmoscope, an artificial eye, color tests, etc., and are instructed in physiological optics and in the physiology of the eye. This course, which consists of a series of laboratory hours, is conducted by the Professor of Physiology and assistants.

The courses scheduled for all regular students are as follows:

THIRD YEAR.

	Hours
LECTURE DEMONSTRATIONS AND CLINICAL LECTURES. <i>Professor de Schweinitz.</i> —Twice a week, for first half year.....	32
PRACTICAL WORK. <i>Ophthalmological Staff.</i> —In sections. One hour a week, for first half year, for each student.....	16

LECTURE DEMONSTRATIONS AND CLINICAL LECTURES.—The subjects covered in this course comprise the methods of examining the patient and the external examination of the eye; functional testing; diseases and injuries of the eye; the eye in its relation to general diseases; medical ophthalmoscopy and medical ophthalmology; and operative ophthalmology.

PRACTICAL WORK. The courses in practical ophthalmology are conducted in the Dispensary for Diseases of the Eye in the University Hospital and in the Eye Wards of the Philadelphia General Hospital. For this purpose the students of the third-year class are divided into sections. The members of each have the opportunity of closely inspecting the patients with external inflammatory diseases of the eye, of seeing the method of applying the remedies, of making the commoner applications utilized in the treatment, of learning the use of the ophthalmoscope so that each student may recognize the healthy fundus and its important diseased conditions; and of ascertaining the results secured by functional testing, such as the pupillary reflexes, the visual acuteness, the field of vision, the balance of the external ocular muscles, and the refractive errors. During the last month of the course a series of quizzes is given and the work of the entire course is reviewed.

ELECTIVE WORK. The students of the fourth year have the opportunity of electing a continuation of the instruction in Ophthalmology, two hours weekly being set aside for this course, which includes practical work in refraction of the eye, functional testing, external diseases of the eye and ophthalmoscopy. Opportunity is also given for work in ophthalmic pathology, and for being present at the ophthalmic operations.

OBSTETRICS.

BARTON COOKE HIRST, M.D.....	<i>Professor of Obstetrics.</i>
RICHARD C. NORRIS, M.D.....	<i>Assistant Professor of Obstetrics.</i>
JOHN H. GIRVIN, M.D.....	} <i>Associates in Obstetrics.</i>
WILLIAM R. NICHOLSON, M.D....	
JOHN C. HIRST, M.D.....	
PHILIP FRANCIS WILLIAMS, M.D..	} <i>Instructors in Obstetrics.</i>
N. L. KNIPE, M.D.....	
C. D. DANIELS, M.D.	
EDMUND J. PIPER, M.D.....	
G. VICTOR JANVIER, M.D.....	
J. H. ALLEN, M.D.....	} <i>Assistant Instructors in Obstetrics.</i>
L. F. LUBURG, M.D.....	
E. P. BARNARD, M.D.....	

A graduated course of instruction in Obstetrics is given to the members of the third- and fourth-year classes in the Maternity

Pavilion of the University Hospital, in the New Medical Laboratories and in the Out-Patient Department of the Hospital, conducted under the direct control of the Professor of Obstetrics.

THIRD YEAR.

	Hours
LECTURES. <i>Professor Hirst</i> .—Twice a week	64
MATERNITY SERVICE. Each student spends a week in the dormitory and is present at the delivery of about six cases.	

FOURTH YEAR.

CONFERENCES. <i>Professor Hirst</i> .—Once a week	32
CLINICS. <i>Professor Hirst</i> .—In sections. Two hours, three times a week, for ten weeks, for each student.....	60
PRACTICAL EXERCISES WITH MANIKINS. <i>Assistant Professor Norris</i> .—In sections. Once a week, for ten weeks, for each student	10
RECITATIONS. <i>Dr. J. C. Hirst</i> .—In sections. Once a week, for ten weeks, for each student	10
MATERNITY SERVICE. Each student spends at least ten days at the Out-Patient Department and delivers on an average ten cases.	

The instruction in Obstetrics includes demonstrations of palpation, pelvimetry and the signs of pregnancy to sections of four students. In the clinical and operative obstetrics the treatment of all the complications and pathological consequences of the childbearing act at all periods, is given in the maternity amphitheatre. One clinical conference a week with the whole class is devoted mainly to diagnosis.

Electives in primary and intermediate plastic operations, cystoscopy and office treatment are offered to the fourth-year class.

In the Anna Dike Scott Memorial Amphitheatre an exhibition of all obstetrical operations is given to the members of both the third- and fourth-year classes.

PRACTICAL EXERCISES IN THE OUT-PATIENT DEPARTMENT. This department is under the direct control of the Professor of Obstetrics. The total indoor and outdoor service amounts to 2,000 cases a year. The complicated cases in this service demanding operative treatment are transported to the University Hospital, and the operations are exhibited to the combined third- and fourth-year classes. Each student attends in confinement about ten labor cases and serves as assistant in the ambulatory dispensary for a week, where he is trained in gynecological diagnosis.

PRACTICAL WORK IN UNIVERSITY HOSPITAL. Recently a dormitory accommodating four students has been instituted. Each student spends at least a week on this service, sleeping in the dormitory, taking the notes of all patients in the hospital, making rounds and being called to see all cases delivered during the night, as well as all other instructive obstetrical procedures.

NEUROLOGY.

WILLIAM G. SPILLER, M.D.....	<i>Professor of Neurology.</i>
JAMES W. McCONNELL, M.D.....	<i>Associate in Neurology.</i>
ALFRED R. ALLEN, M.D.....	} <i>Associates in Neurology and in Neuropathology.</i>
S. D. LUDLUM, M.D.....	
N. S. YAWGER, M.D.....	} <i>Instructors in Neurology.</i>
GEORGE WILSON, M.D.....	
SAMUEL LEOPOLD, M.D.....	} <i>Instructors in Neurology and in Neuropathology.</i>
WILLIAMS B. CADWALADER, M.D.	

THIRD YEAR.

NEUROPATHOLOGY. See under Pathology.

FOURTH YEAR.

	Hours
CLINICAL LECTURES AND LANTERN DEMONSTRATIONS IN NEUROPATHOLOGY. <i>Professor Spiller.</i> —Twice a week first half year; once a week second half year.....	48
WARD CLASSES. <i>Drs. McConnell, Ludlum and Leopold.</i> —In sections. Two hours a week, for ten weeks, for each student	20

NEUROPATHOLOGY. The course is open also to post-graduate students. The work is in part clinical. The students are shown various gross pathological specimens and are taught the signs and symptoms caused by the lesions represented by these specimens. In this way they receive much instruction in the physiology as well as the pathology of the nervous system. When considered desirable, the clinical history of the case illustrated is given. The students are taught the practical application of their knowledge of anatomy and physiology and are prepared for their fourth year clinical work in neurology. The technique employed in investigation is also taught so far as possible, so as to include the methods of imbedding, cutting, staining, etc., employed in this branch of medicine. The students are in this

way prepared to conduct original investigations in the pathology of the nervous system after their graduation, if they so desire. Instruction is also given in the methods of preparation of the brain and cord for gross examination, so that the nervous tissues may not be injured for microscopical study.

Microscopical sections illustrating many pathological conditions are demonstrated by the lantern to the fourth-year class during the year, so that the students are enabled to study the more minute morbid changes occurring in diseases of the nervous system, and to understand the symptoms produced by them. These lantern lectures are co-ordinated with the clinical lectures in order to demonstrate the pathology of the clinical cases shown.

CLINICAL LECTURES. One clinical lecture a week is given at the University Hospital throughout the first half of the year by Professor Spiller.

One lecture a week is also given by Professor Spiller during the entire year at the Philadelphia General Hospital. An effort is made to systematize the teaching, especially at the Philadelphia General Hospital, where the large amount of material always at command enables the teacher to select and arrange beforehand the subjects to be discussed.

WARD CLASS INSTRUCTION. This is given both in the University and in the Philadelphia General Hospital. The class is divided into small sections, so as to give each student the opportunity of personally investigating the cases under the supervision of the instructors.

Electives in Neurology will be given by Drs. Leopold and Cadwalader in accordance with the arrangements which may be made at the beginning of the session or during its continuance.

In connection with the teaching given in the wards of the University and Philadelphia General Hospitals, advantage is taken of the large outdoor neurological service, students desiring to avail themselves of the opportunity, being instructed in the dispensary at times previously arranged. In this way students are brought in contact with nervous diseases in their earlier as well as in their later manifestations. The methods of studying, recording and treating cases are taught. Lectures and demonstrations in electro-therapeutics are given by Dr. S. Leopold to sections of the fourth-year class. The electromedical apparatus used in the outdoor service is of the most modern type, including static, galvanic and faradic instruments. Instruction is given in the use of the methods now employed in the treatment of diseases of the nervous system.

MENTAL DISEASES.CHARLES W. BURR, M.D.....*Professor of Mental Diseases.***FOURTH YEAR.**LECTURES. *Professor Burr.*—Once a week..... Hours 32

All instruction in Mental Diseases is given in the Philadelphia General Hospital. The first five lectures are systematic, dealing with the aetiology and general symptomatology of such affections, all the remainder being clinical lectures. An elective course is also given; each student who takes it examines the patients himself, reporting his findings and diagnoses to the professor for criticism. Especially in these latter exercises he obtains an insight into the general workings of asylum management.

LARYNGOLOGY AND RHINOLOGY.CHARLES P. GRAYSON, M.D.....*Professor of Laryngology and Rhinology.*D. N. HUSIK, M.D.....*Instructor in Laryngology and Rhinology.*

E. C. BENDER, M.D.....

JOSEPH P. TUNIS, M.D..... } *Assistant Instructors in Laryngology.*

JUSTIN G. SCHWERIN, M.D. }

THIRD YEAR.LECTURES. *Professor Grayson.*—Once a week, for second half year Hours 16PRACTICAL WORK IN OUT-PATIENT DEPARTMENT. *Professor Grayson and Assistants.*—In sections. Once a week, for ten weeks, for each student 10

LECTURES AND CLINICS. Covering the anatomy and physiology of the upper air and digestive tracts, these being illustrated by drawings and by dry and wet preparations. The diseases of the nose and its accessory cavities, of the pharynx, the fauces and the larynx, are systematically studied; and in connection with their causation and treatment, emphasis is laid upon the pathologic and therapeutic importance of the systemic conditions with which they are often associated. The surgery of these special regions is also thoroughly demonstrated during the course by a series of clinics.

PRACTICAL WORK IN OUT-PATIENT DEPARTMENT. Throughout equal periods of the session the third-year class attends this course, divided into sections of such size that each student receives an

abundance of practical work under the personal supervision of Dr. Grayson and his assistants. The very large service of this dispensary provides ample material for the members of the class to acquire proficiency in the use of the various instruments of examination and treatment, and to become expert in the diagnosis and treatment of the diseases that are more often encountered in general practice.

OTOLOGY.

B. ALEXANDER RANDALL, M.D.....	<i>Professor of Otology.</i>
RALPH BUTLER, M.D.....	<i>Assistant Professor of Otology.</i>
BENJAMIN D. PARISH, M.D.....	} <i>Instructors in Otology.</i>
JAMES A. BABBITT, M.D.....	
BENJAMIN C. GILE, M.D.....	
ISAAC H. JONES, M.D.....	<i>Instructor in Neuro-Otology.</i>
LEWIS FISHER, M.D.....	} <i>Assistant Instructors in Otology.</i>
SETH A. BRUMM, M.D.	

THIRD YEAR.

LECTURES. <i>Professor Randall.</i> —Once a week, second half year.	Hours 16
WARD CLASSES. <i>Professor Randall and Assistant Professor Butler.</i> —In sections. Once a week, for ten weeks, for each student	10

LECTURES. Partly clinical, but with abundant illustrations by anatomical and pathological preparations, models, charts and the stereopticon. Operations for diseases of the mastoid and lateral sinus and abscess of the brain are demonstrated on the cadaver, if not upon patients.

PRACTICAL WORK. Practical work is given to the class in subsections of ten or less, in the newly equipped Out-Patient Department or wards of the University Hospital. Individual instruction is given by the dispensary staff in the examination, recording and treatment of patients, the work being delegated to the students so far as they may show themselves competent. All are thus drilled in the use of the head-mirror, in rhinoscopy and Eustachian catheterization, as well as in simpler measures. In mastoid and other operations selected students assist or operate under strict supervision, and follow the cases in the later dressings. Stress is laid throughout upon simplicity in the essential methods of diagnosis and treatment, with minute and conscientious care in application.

A Sub-Department of Neuro-Otology has been established nearly two years, to which are referred all cases for cerebral localization, etc., by the ear tests, with most satisfactory results.

MEDICAL JURISPRUDENCE.

DANIEL J. MCCARTHY, A.B., M.D., *Professor of Medical Jurisprudence.*

FOURTH YEAR.

	Hours
LECTURES. <i>Professor McCarthy.</i> —Once a week, second half	
year	16

ELECTIVES.

FOURTH YEAR.

A number of courses are offered in Medicine, Surgery, Pediatrics, Orthopedic Surgery, Mental Diseases, Neurology, Genito-Urinary Surgery, Dermatology, Ophthalmology, Otology, Laryngology, Infection and Immunity, Plastic Operations in Obstetrics, Cystoscopy, Gynecology, Surgical Therapeutics, Physiology of the Nervous System, and in a few other subjects. Each student has available eleven hours a week for ten weeks for these electives and must elect courses amounting to at least sixty hours. . 60-110

FIRST-YEAR CLASS, 1916-1917.

ORDER OF INSTRUCTION, DAILY, BEFORE FEB. 1.

<i>Hours.</i>	<i>Monday.</i>	<i>Tuesday.</i>	<i>Wednesday.</i>	<i>Thursday.</i>	<i>Friday.</i>	<i>Saturday.</i>
9 A. M.	Abbott. Bacteriology.	Taylor. Physiological Chemistry.	Taylor. Physiological Chemistry.	Taylor. Physiological Chemistry.	Hendrix and Stehle. Physiological Chemistry.	Taylor. Physiological Chemistry.
10 A. M.	Laboratory of Physiological Chemistry.	Laboratory of Physiological Chemistry.	Laboratory of Histology and Embryology.	Laboratory of Physiological Chemistry.	Laboratory of Physiological Chemistry.	Laboratory of Histology and Embryology.
11 A. M.						
12 M.						
1 P. M.						
2 P. M.	Osteology and Dissection.	Osteology and Dissection.	Osteology and Dissection.	Osteology and Dissection.	Osteology and Dissection.	
3 P. M.						
4 P. M.	Piersol. Anatomy.	Piersol. Anatomy.	Piersol. Anatomy.	Hendrix and Stehle. Physiological Chemistry.	Hendrix and Stehle. Physiological Chemistry.	
5 P. M.	Hendrix and Stehle. Physiological Chemistry.	Gymnasium.			Gymnasium.	

For the first four weeks the class will work in the period from 1.30 to 4 P. M., in the Osteological Laboratory daily; thereafter in the same hours in the Dissection Room.

First period, from October 2 to November 25—48 working days.

Second Period, from November 27 to January 27—40 working days.

FIRST-YEAR CLASS, 1916-1917.

ORDER OF INSTRUCTION, DAILY, **AFTER** FEB. 1.

	<i>Monday.</i>	<i>Tuesday.</i>	<i>Wednesday.</i>	<i>Thursday.</i>	<i>Friday.</i>	<i>Saturday.</i>
urs.						
. M.						
A. M.	Bacteriological Laboratory.	Bacteriological Laboratory.	Laboratory of Histology and Embryology.	Bacteriological Laboratory.	Bacteriological Laboratory.	Laboratory of Histology and Embryology.
. M.						
. M.						
. M.						
. M.						
. M.	Dissection.	Dissection.	Dissection.	Dissection.	Dissection.	
. M.						
. M.	Piersol. Anatomy.	Piersol. Anatomy.	Piersol. Anatomy.	Smith. Ætiology.	Stevens. Medical Terminology.	
. M.		Gymnasium.			Gymnasium.	

SECOND-YEAR CLASS, 1916-1917.

ORDER OF INSTRUCTION, DAILY, BEFORE FEB. 1.

<i>Hours.</i>	<i>Monday.</i>	<i>Tuesday.</i>	<i>Wednesday.</i>	<i>Thursday.</i>	<i>Friday.</i>	<i>Saturday.</i>
9 A. M.	Smith. Pathology.	Smith. Pathology.	Richards. Pharmacology.	Richards. Pharmacology.	Smith Pathology.	Pharmacologic Conference. Section A.
10 A. M.	Pathological Laboratory.	Pathological Laboratory.	Physiological Laboratory.	Physiological Laboratory.	Pathological Laboratory.	Physiological Laboratory.
11 A. M.						
12 M.						
1 P. M.	First Period.	First Period.	First Period.	First Period.	First Period.	
2 P. M.	Second Period.	Second Period.	Second Period.	Second Period.	Second Period.	
3 P. M.	Pharmacological Laboratory. Section A.	Pharmacological Laboratory. Section B.	Pharmacological Laboratory. Section A.	Pharmacological Laboratory. Section B.	Smith. Pathology.	
4 P. M.	Reichert. Physiology.	Reichert. Physiology.	Pharmacological Conference. Section B.	Reichert. Physiology.	Reichert. Physiology.	
5 P. M.	McKenzie. Physical Therapy.		McKenzie. Physical Therapy.			

The class is divided into two sections, A and B, for work in the Laboratory of Pharmacology and for Pharmacological Conferences; elsewhere the entire class accommodated at each period scheduled.

First Period, from October 2 to November 25—48 working days.

Second Period, from November 27 to January 27—40 working days.

SECOND-YEAR CLASS, 1916-1917.

ORDER OF INSTRUCTION, DAILY, AFTER FEB. 1.

<i>Hours.</i>	<i>Monday.</i>	<i>Tuesday.</i>	<i>Wednesday.</i>	<i>Thursday.</i>	<i>Friday.</i>	<i>Saturday.</i>
A. M.	Smith. Pathology.	Smith. Pathology.	Pharmacological Conference. Section B.	Richards. Pharmacology.	Pharmacological Conference. Section A.	Richards. Pharmacology.
A. M.						
A. M.	Pathological Laboratory.	Pathological Laboratory.	Physiological Laboratory.	Physiological Laboratory.	Pathological Laboratory.	Physiological Laboratory.
12 M.						
P. M.						
P. M.	Pharmacological Laboratory. Section A.	Toxicological Laboratory.	Pharmacological Laboratory. Section B.	Smith. Pathology.	Smith. Pathology.	
P. M.	Physical Diagnosis. Section B.		Physical Diagnosis. Section A.	Marshall. Toxicology.	Smith. Lantern Conference.	
P. M.	Reichert. Physiology.	Reichert. Physiology.	G. W. Norris. Physical Diagnosis.	Reichert. Physiology.	Reichert. Physiology.	
P. M.	McKenzie. Physical Therapy.	Piper. Obstetrics, beginning April 9, 1917.	McKenzie. Physical Therapy.	Bandaging. Section A.	Bandaging. Section B.	

SUBSECTION ROSTER, THIRD-YEAR CLASS. SESSION 1916-17.

FIRST PERIOD—OCTOBER 9th TO DECEMBER 21st, INCLUSIVE.

<i>Hour.</i>	<i>Subject.</i>	<i>Monday.</i>	<i>Tuesday.</i>	<i>Wednesday.</i>	<i>Thursday.</i>	<i>Friday.</i>
2-3	Dermatology....	C ¹	D ³	A ¹	B ³	—
3-4	Otology.....	C ¹	—	A ³	—	D ¹
3-4	Laryngology.....	C ²	D ³	A ¹	C ³	D ²

SECOND PERIOD—JANUARY 3d TO MARCH 10th., INCLUSIVE.

<i>Hour.</i>	<i>Subject.</i>	<i>Monday.</i>	<i>Tuesday.</i>	<i>Wednesday.</i>	<i>Thursday.</i>	<i>Friday.</i>
2-3	Dermatology....	C ²	D ²	A ²	B ²	—
3-4	Otology.....	C ²	D ³	B ³	—	D ²
3-4	Laryngology.....	C ¹	—	A ²	—	D ¹

THIRD PERIOD—MARCH 12th TO MAY 26th, INCLUSIVE.

<i>Hour.</i>	<i>Subject.</i>	<i>Monday.</i>	<i>Tuesday.</i>	<i>Wednesday.</i>	<i>Thursday.</i>	<i>Friday.</i>
2-3	Dermatology....	C ³	D ¹	A ³	B ¹	—
3-4	Otology.....	C ³	A ¹	B ²	B ¹	A ²
3-4	Laryngology.....	—	A ³	B ¹	B ³	B ²

From October 9th to February 3d the sections are scheduled for Ophthalmology as follows:

	<i>Monday.</i>	<i>Tuesday.</i>	<i>Thursday.</i>
3-4	C ³ , D ¹ , D ² , D ³	A ¹ , A ² , A ³ , B ¹	B ² , B ³ , C ¹ , C ²

Hours.	Monday.		Friday.	Saturday.
9 A. M.	MARTIN. Surgery.		JLLER. rgery.	Ross or ELIASON. Surgery.
10 A. M.	W. PEPPER. Clinical Pathology.		BOTT. e Feb. 1. crk, Med. Feb. 1.	Bandaging. Sections C and D. Before Feb. 1.
11 A. M.	HARTZELL. Before Feb. 1. FUSSELL. After Feb. 1.		EVENS. e Feb. 1. NAHL. Feb. 1.	FUSSELL. Applied Therapeutics. Before Feb. 1. H. C. Wood. Medico-Chi Students. Before Feb. 1.
12 M.	STENGEL. Medicine.		RNETT. rgery.	
1 P. M.				
2 P. M.	Clinical Pathology. Section A ¹ , A ² , A ³ . Medical Dispensary. Section B ¹ , B ² , B ³ .	Dermatology. See Subsection Roster.	HARTZELL. Sec. C and D. Before Feb. 1. Sec. A and B. After Feb. 1.	
3 P. M.		Ophthalmology. See Subsection Roster. Otology and Laryngology. See Subsection Roster.	Otology and Laryngology. See Subsection Roster.	
4 P. M.	T. T. THOMAS. Applied Anatomy.		WEINITZ. almology. e Feb. 1. NDALL. ology. Feb. 1.	
5 P. M.	H. C. Wood. Medico-Chi Students. Before Feb. 1.		THOMAS. Anatomy.	

* From October 9th to February 3d all the B sections (B¹, B², B³) on Tuesday with B² and B³. After Thursday.

ORDER OF DAILY INSTRUCTION.—THIRD YEAR CLASS.—1916-17.

Hours.	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
9 A. M.	MARTIN. Surgery.	JOPSON. Before Feb. 1. Pediatrics. After Feb. 1.	Gross Morbid Anatomy. Sections C and D.	Gross Morbid Anatomy. Sections A and B.	MÜLLER. Surgery.	ROSS or ELIASON. Surgery.
10 A. M.	W. PEPPER. Clinical Pathology.	ABBOTT. Before Feb. 1. Prac. Work, Surgery. After Feb. 1.	SEILER. Neuropathology. Sections B. Before Dec. 1. Practical Therapeutics. Sections A and B. After Dec. 1.	SEILER. Neuropathology. Sections C and D. Before Dec. 1. Practical Therapeutics. Sections C and D. After Dec. 1.	ABBOTT. Before Feb. 1. Prac. Work, Med. After Feb. 1.	Bandaging. Sections C and D. Before Feb. 1.
11 A. M.	HARTZELL. Before Feb. 1. FUSSELL. After Feb. 1.	MARTIN. Surgery.	A. C. WOOD. Minor Surgery.	FUSSELL. Applied Therapeutics. H. C. Wood. Medico-Chi Students. Before Feb. 1.	STEVENS. Before Feb. 1. STAHL. After Feb. 1.	FCSSELL. Applied Therapeutics. Before Feb. 1. H. C. Wood. Medico-Chi Students. Before Feb. 1.
12 M.	STENOEL. Medicine.	AUSTIN. Before Feb. 1. O. H. P. PEPPER. After Feb. 1.	STENOEL. Medicine.	Bandaging. Sections A and B. Before Feb. 1.	CARNETT. Surgery.	
1 P. M.						
2 P. M.	Clinical Pathology. Section A, A', A". Medical Dispensary. Section B, B', B". Dermatology. See Subsection Roster. Ophthalmology. See Subsection Roster.	Clinical Pathology. Section B, B', B". Medical Dispensary. Section C, C', C". Dermatology. See Subsection Roster. Ophthalmology. See Subsection Roster.	Clinical Pathology. Section C, C', C". Medical Dispensary. Section D, D', D". Dermatology. See Subsection Roster. Otolaryngology. See Subsection Roster.	Clinical Pathology. Section D, D', D". Medical Dispensary. Section A, A', A". Dermatology. See Subsection Roster. Ophthalmology. See Subsection Roster. Otolaryngology. See Subsection Roster.	Medical Dispensary. Section A. Oct. 4 to Nov. 28. Section B. Nov. 29 to Feb. 31. Section C. Feb. 5 to Mar. 31. Section D. Apr. 2 to May 28.	HARTZELL. Sec. C and D. Before Feb. 1. Sec. A and B. After Feb. 1. Otolaryngology. See Subsection Roster.
3 P. M.						
4 P. M.	T. T. THOMAS. Applied Anatomy.	HIRST. Obstetrics.	CLARK. Gynecology.	HIRST. Obstetrics.	DE SCHEWINITZ. Ophthalmology. Before Feb. 1. RANDALL. Otolaryngology. After Feb. 1.	
5 P. M.	H. C. WOOD. Medico-Chi Students. Before Feb. 1.	H. C. WOOD. Medico-Chi Students. Before Feb. 1.	DE SCHEWINITZ. Ophthalmology. Before Feb. 1. GRAYSON. Laryngology. After Feb. 1.		T. T. THOMAS. Applied Anatomy.	

For Subsection Roster, see other side.

* From October 9th to February 3d Section B' will have Clinical Pathology on Thursday with D' and D"; and Section D' will have Clinical Pathology on Tuesday with B' and B". After February 3d all the B sections (B, B', B") will have Clinical Pathology on Tuesday and all the D sections (D, D', D") will have Clinical Pathology on Thursday.

The Class is divided into 3 equal groups:

- Group I. Medical Trimester Group.
- Group II. Surgical Trimester Group.
- Group III. Obstetrical—Gynecology—Elective Group.

1. During the hours from 9 to 12 daily (except Sunday) and from 2 to 4 (4.30 Tuesday and Thursday) and

with *Sectional Work* in the subjects designated in the Rosters.

2. From 12 to 1 the *whole class* will attend lectures or clinics.

3. From 4 to 5 (4.30 to 5.30 Tuesday and Thursday) the whole class will attend clinical lectures.

During the Elective Trimester:

- the hours from 11 to 12 on Wednesday, Thursday and Friday,
- 2 to 4.30 on Tuesday and Thursday,
- 2 to 4 on Wednesday,
- 2 to 3 on Friday,

will be open for elective work—a total of 110 hours.

Each student will be required to elect at least 60 hours of elective work.

FOURTH YEAR CLASS.—SESSION 1916-17.

Trimester Roster.

	October 9 to December 21.	January 3 to March 10.	March 12 to May 19.
Medical Trimester.	<p>1-25</p> <p>Medical Wards { 1-13 Oct. 9 to Nov. 11 University Hospital { 14-25 Nov. 13 to Dec. 21</p> <p>Medical Wards { 14-25 Oct. 9 to Nov. 11 Philadelphia Hospital { 1-13 Nov. 13 to Dec. 21</p>	<p>26-50</p> <p>Medical Wards { 26-38 Jan. 3 to Feb. 3 University Hospital { 39-50 Feb. 5 to Mar. 10</p> <p>Medical Wards { 39-50 Jan. 3 to Feb. 3 Philadelphia Hospital { 26-38 Feb. 5 to Mar. 10</p>	<p>51-74</p> <p>Medical Wards { 51-62 Mar. 12 to Apr. 14 University Hospital { 63-74 Apr. 16 to May 19</p> <p>Medical Wards { 63-74 Mar. 12 to Apr. 14 Philadelphia Hospital { 51-62 Apr. 16 to May 19</p>
Surgical Trimester.	51-74	1-25	26-50
Gynecology, Obstetrics, and Elective Trimester.	26-50	51-74	1-25

ORDER OF INSTRUCTION.—FOURTH YEAR CLASS, 1916-17.

Medical Trimester.

Hours	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
9 A. M.	Medical Wards. Philadelphia and University Hospitals.	Medical Wards. Philadelphia and University Hospitals.	Medical Wards. Philadelphia and University Hospitals.	Medical Wards. Philadelphia and University Hospitals.	Medical Wards. Philadelphia and University Hospitals.	HIRST. Obstetrics.
10 A. M.						Medical Wards. Univ. Hosp.
11 A. M.						*Pediatric Wards. Univ. Hosp.
12 M.	STENGEL. Medicine.	MARTIN. Surgery.	SPILLER. Neurology.	NEILSON. Before Feb. 1. MARTIN. After Feb. 1.	FRAZIER. Surgery.	GRIFFITH. Pediatrics.
1 P. M.						
2 P. M.	STEVENS AND ALLYN. Medical Wards. Phila. Hosp. Subsection. Pediatrics. Subsection.	FUSSELL. Univ. Hosp. Medical Wards. Subsection. Pediatrics. Subsection.	STEVENS AND ALLYN. Medical Wards. Phila. Hosp. Subsection. Pediatrics. Subsection.	FUSSELL. Univ. Hosp. Medical Wards. Subsection. Pediatrics. Subsection.	STEVENS AND ALLYN. Medical Wards. Phila. Hosp. Subsection. Pediatrics. Subsection.	
3 P. M.						
4 P. M.	SPILLER. Neurology. Before Feb. 1. McCARTHY. After Feb. 1.	4.30 BURR. Mental Diseases.	RIESMAN. Clinical Conference.	SAILER. Clinical Conference.	STENGEL. Clinical Conference.	
5 P. M.		5.30			5.30	

*The section working in Medical Wards, Philadelphia Hospital, will report at Pediatric Wards, University Hospital, on Saturdays from 10-12.

ORDER OF INSTRUCTION.—FOURTH YEAR CLASS, 1916-17.

Surgical Trimester.

<i>Hours.</i>	<i>Monday.</i>	<i>Tuesday.</i>	<i>Wednesday.</i>	<i>Thursday.</i>	<i>Friday.</i>	<i>Saturday.</i>
A. M.	Surgical Ward Work.	Surgical Ward Work.	Phipps Institute.	Surgical Ward Work.	Surgical Ward Work.	HIRST. Obstetrics.
A. M.					DEAVER. Univ. Hosp.	Surgical Ward Work.
A. M.						
12 M.	STENGEL. Medicine.	MARTIN. Surgery.	SPILLER. Neurology.	NEILSON. Before Feb. 1. MARTIN. After Feb. 1.	FRAZIER. Surgery.	GRIFFITH. Pediatrics.
P. M.						
P. M.	Genito-Urinary Ward Classes.	Operative Surgery.	Genito-Urinary Ward Classes.	DEAVER. Surgical Clinic. German Hospital.	Laboratory of Surgical Pathology.	
P. M.					STENGEL. Clinical Conference.	
P. M.	SPILLER. Neurology. Before Feb. 1. McCARTHY. After Feb. 1.		RIESMAN. Clinical Conference.	4.30 SAILER. Clinical Conference.		
P. M.		4.30 BURR. Mental Diseases.				
P. M.		5.30			5.30	

ORDER OF INSTRUCTION.—FOURTH YEAR CLASS, 1916-17.

Obstetrics, Gynecology, Elective Trimester.

Hours.	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
9 A. M.	CLARK. Gynecology.	HIRST. Obstetrics.	CLARK. Gynecology.	HIRST. Obstetrics.	CLARK. Gynecology.	HIRST. Obstetrics.
10 A. M.						HIRST. Obstetrics, (Section.)
11 A. M.	Recitation. Gynecology.	Recitation. Obstetrics.	Elective.	Elective.	Elective.	
12 M.	STENGEL. Medicine.	MARTIN. Surgery.	SPILLER. Neurology.	NEILSON. Before Feb. 1. MARTIN. After Feb. 1.	FRAZIER. Surgery.	GRIFFITH. Pediatrics.
1 P. M.						
2 P. M.	Operative Obstetrics.	Elective.	Elective.	Elective.	Elective.	
3 P. M.	Neurological Ward Classes.				Neurological Ward Classes.	
4 P. M.	SPILLER. Neurology. Before Feb. 1. McCARTHY. After Feb. 1.	4.30. BURR. Mental Diseases.	RIESMAN. Clinical Conference.	4.30. SAILER. Clinical Conference.	STENGEL. Clinical Conference.	
5 P. M.		5.30			5.30	

NOTE.—For the various Elective Courses in Medicine, Surgery, Pediatrics, Orthopedic Surgery, Mental Diseases, Neurology, Genito-Urinary Diseases, Dermatology, Ophthalmology, Otology, Laryngology, Infection and Immunity, Plastic Operations in Obstetrics, Cystoscopy, Surgical Therapeutics, Physiology of the Nervous System, etc., see the special Bulletins which will be posted.

PART IV.

GRADUATE WORK.

The Medico-Chirurgical College Graduate School of Medicine of the University of Pennsylvania.

According to the agreement entered into by the University of Pennsylvania and the Medico-Chirurgical College of Philadelphia at the time of the merger of these two schools a Post Graduate School of Medicine has been created. The details of the proposed conduct of this school will be published later.

In addition to the usual accommodations afforded graduates of this and other regular medical schools to attend the laboratory and clinical work of the school, three special provisions for post-graduate work leading to degrees are open to applicants, viz.: a course of instruction in Public Hygiene leading to the degree Dr.P.H. (Doctor of Public Hygiene) for graduates in Medicine and the certificate C.S. (Certified Sanitarian), for those not holding the M.D. degree, and, under the rules of the Graduate School of the University of Pennsylvania, the election of certain branches in the School of Medicine in courses leading to the Ph.D. degree.

In addition, the special courses in Tropical Medicine are intended especially for post-graduates, and a limited number of post-graduate students may be accommodated in the work of the Phipps Institute.

1.—COURSES IN PUBLIC HYGIENE.

ALEXANDER C. ABBOTT, M.D., Sc.D., Dr.P.H., Pepper Professor of Hygiene and Bacteriology and Director of the Laboratory of Hygiene.

WILLIAM EASBY, JR., C.E., Professor of Municipal Engineering.

ALLEN J. SMITH, A.M., M.D., Sc.D., LL.D., Professor of Pathology, Comparative Pathology and Director of the Courses in Tropical Medicine.

R. TAIT MCKENZIE, A.B., M.D., Professor of Physical Education and Director of the Department of Physical Education.

LOUIS A. KLEIN, V.M.D., Professor of Pharmacology and Veterinary Hygiene and Dean of the Veterinary School.

DAVID H. BERGEY, A.M., M.D., Dr.P.H., Assistant Professor of Hygiene and Bacteriology.

THOMAS NOLAN, PH.B., M.S., A.M., Professor of Architectural Construction.

PHILIP P. CALVERT, PH.D., Professor of Zoölogy.

HENRY FIELD SMYTH, M.D., DR.P.H., Instructor in Hygiene and Bacteriology.

BRUCE D. MUDGETT, A.B., PH.D., Instructor in Insurance and Brokerage.

WALTER S. CORNELL, B.S., M.D., Instructor in Osteology, University of Pennsylvania, Director of Medical Inspection in the Public Schools of Philadelphia.

DAVID HENRY WENRICH, PH.D., Instructor in Zoölogy.

SENECA EGBERT, M.D., Professor of Hygiene.

Sanitary Engineering.—Including a consideration of water supplies; sewerage and sewage disposal; the disposal of municipal refuse and street cleaning.

Sanitary Engineering of Buildings.—Including the principles and practices involved in their heating and ventilation; the various methods of draining and plumbing.

Inspection of Meat, Milk and Other Animal Products.—Comprehending a discussion of the general question of meat inspection, of the diseases of food-producing animals dangerous to man; of milk, particularly of the proper methods of production, preservation and delivering; and of the approved methods for the preservation of all such products.

Practical Methods Used in Sanitary Work; i. e., the practical application of chemical, physical and biological methods to the study of the air, water, soil, food, raiment; the methods for the disposal of refuse; the characteristics of offensive and dangerous trades.

Practical Bacteriology.—Covering the use of apparatus, the methods of cultivating and isolating bacteria; the study of special types of bacteria, particularly those concerned in the causation of disease; a study of immunity, protective vaccinations and the blood reactions attendant thereto; a study of disinfectants and methods of practical disinfection; the bacteriological analysis of air, water, soil, foods, etc.

Protozoölogy.—This course includes a general introduction to the structure, physiology, life-histories and classification of the protozoa, with especial reference to those forms which

cause disease in man and the lower animals. Attention is paid to the technique of protozoan investigation, the special methods of cultivating, fixing, staining and sectioning the protozoa being considered. An attempt is made in the lectures to point out the most promising fields for future investigation, and facilities are offered (in the laboratory) to those desiring them, to pursue original lines of research.

Arthropods and Disease.—Characters and structures of the arthropods and their subdivisions, with special attention to those forms of arachnids and of insects which as parasites or otherwise attack man and mammals and which carry, or may serve as carriers of disease, or which possess poisonous secretions.

Helminthology and General Medical Zoölogy.—In this course are discussed animal parasites in general, particularly their anatomy, life history and modes of dissemination, followed by special consideration of the trematodes, cestodes and nematodes parasitic for man. Where necessary or desirable for purposes of illustration similar parasites occurring in other animals are introduced. This instruction is by both lectures and laboratory work.

Pathology of Tropical Diseases.—In this course are discussed in general the factors involved in the causation of diseases peculiar to tropical countries, taking up principally those due to protozoa, to bacteria and to the higher vegetable parasites together with those referable to unknown and non-vital causes. This instruction is given both by lectures and laboratory exercises.

Medical Inspection of Schools.—This instruction is given in a course of lectures on the subject of medical inspection of school children, and the segregation and care of the mentally deficient pupil found in the schools.

Personal Hygiene.—Covering the topics of anthropometry, the use of exercise for correction of defects; the value of exercise in the maintenance of physiological equilibrium.

Vital Statistics.—Statistical methods and the results, with special reference to the population of cities.

Sanitary Legislation.—Comprising a study of the Federal, State and Municipal laws and regulations for safeguarding the public health.

General Hygiene.—Designed to co-ordinate the foregoing topics and to indicate the relation of each and all to the general question of preventive medicine.

Industrial Hygiene.—Lectures and demonstrations upon the history and development of the subject, together with tours of inspection to typical industries.

This course covers one academic year.

At the termination of the course both theoretical and practical examinations will be held and on all Doctors of Medicine demonstrating fitness, a degree, Dr.P.H., designating the holder as "Doctor of Public Hygiene," will be conferred. To those participants in such subjects of the course as are not strictly medical and who do not hold the degree Doctor of Medicine, a certificate designating the holder as "Certified Sanitarian" will be awarded.

At the regular meeting of the Board of Trustees of the University of Pennsylvania, held March 9, 1914, it was decided that all candidates for the degree Doctor of Public Hygiene shall be required to have had the same preliminary education as that now demanded of those entering upon medical courses leading to the degree of Doctor of Medicine; that is to say, at least two years of college work plus the specified amount of physics, chemistry and biology as set forth in the University of Pennsylvania catalogue. The fee for the course, including the diploma, is \$150.00. For circular of particulars apply to the

Director of the Laboratory of Hygiene,
University of Pennsylvania.

2.—COURSES IN THE GRADUATE SCHOOL OF THE UNIVERSITY OF PENNSYLVANIA.

Certain branches of instruction in the Medical School have been incorporated in the Graduate School of the University by the Trustees, and may be elected in appropriate groups by eligible individuals for work for the Master's Degree, or that of Ph.D. The possession of a Baccalaureate Degree is required for admission, and the conditions are subject to the rules of the Graduate School of the University of Pennsylvania. For information address Dean of Graduate School of University of Pennsylvania, Philadelphia.

Majors—Anatomy; Physiology; Physiological Chemistry; Bacteriology; Pathology; Research Medicine; Pharmacology.

Professor PIERSON.

1. Anatomy. Taken as a major only by individuals with satisfactory preparation in Human Anatomy or General Anatomy, and offered only for research work upon such anatomical subjects as may be assigned by the Professor of Anatomy after consultation with each student. Hours to be assigned in each case.

General Human Anatomy may be taken as a minor by students approved by the Professor of Anatomy. Hours for lectures and dissection exercises to follow the class work schedules for the students of the School of Medicine, along with such supplementary work as may be indicated by the professor in charge. As a maximum not above 6 credits will be recognized for such work.

Special portions of Human Anatomy as may harmonize with other branches of study (as the anatomy of the nervous system for students of psychology) may be selected as minors. Hours of instruction to follow the schedule for such subjects in the School of Medicine with supplementary work to be indicated by the professor in charge.

Professor REICHERT.

2. Physiology. Taken as a major only by individuals with satisfactory preparation and offered only for research work upon such physiological topics as may be assigned by the Professor of Physiology after consultation with each student. Hours to be assigned in each case.

Taken as a minor only by students with approved preparation, in appropriate arrangement with other selected branches. Hours of lecture and laboratory exercises as scheduled in the School of Medicine with supplementary work as indicated by the professor in charge. As a maximum not above 6 credits will be recognized for such work.

Professor TAYLOR.

3. Physiological Chemistry. Taken as a major only by students with approved preparation in General Chemistry and elementary Physiological Chemistry, and offered only for research study upon such topics as may be assigned by the Professor of Physiological Chemistry after consultation with the individual student. Hours to be assigned in each case.

Taken as a minor only by students with approved preparation in General Chemistry, in appropriate arrangement with other

selected branches. Hours of lecture and laboratory exercises as scheduled in the School of Medicine; to be supplemented by work to be indicated by the professor in charge. As a maximum not above 4 credits will be recognized for such work.

Professor ABBOTT.

4. Bacteriology. Taken as a major only by students approved by the Professor of Hygiene and Bacteriology for work in General Bacteriology or for work with the pathogenic organisms. Hours of instruction and laboratory work assigned by the professor in charge for each individual accepted.

Taken as a minor in connection with other appropriate subjects selected. Hours of instruction and laboratory exercises as scheduled in the School of Medicine, with supplementary work to be indicated by the professor in charge. As a maximum not above 3 credits will be recognized for such work.

Public Hygiene. Lecture 2 hours a week. First term. One credit.

Practical Hygiene. Twelve hours. Laboratory work weekly. First term. Three credits.

Professor SMITH.

5. Pathology. General Pathology or special divisions of appropriate dignity may be selected as major subjects only by students with approved preparation; the work in any subject to be conducted with the instruction in the School of Medicine as a basis and advancing into individual research in topics assigned by the Professor of Pathology after consultation with the individual student. Hours of instruction and laboratory work assigned in each case.

Courses of lecture and laboratory instruction at present in operation include, along with the usual subjects, protozoan infections and metazoan parasitology, and serology. Where the existing instruction to the classes in the School of Medicine is taken, it can be accepted only with supplementary work to be indicated by the professor in charge, and will be recognized for the maximum of not above 6 credits.

Professor C. W. BURR.

6. Mental Diseases. Taken as a minor by students with approved preparation in psychology; the work to be taken in connection

with the course in the School of Medicine. Further instruction consisting of one hour a week in ward class; work will be given to students far enough advanced to profit by it. One-half or 1 credit.

Professor R. M. PEARCE.

7. Research Medicine. This subject is open either as a major or minor to students with approved preparation, for research work in those problems of scientific medicine to which can be applied laboratory methods.

Professor A. N. RICHARDS.

8. Pharmacology. Work may be elected as either a major or minor in this branch, subject in matter of instruction and hours to the requirements of the student with approval of the professor in charge. As a minor, a maximum of not above 4 credits.

3.—COURSES IN TROPICAL MEDICINE.

Professor A. C. ABBOTT.....	<i>Bacteriology, Medical Climatology and Geography, Hygiene of the Tropics and of Ships.</i>
Dr. DAVID HENRY WENRICH.....	<i>Protozoölogy.</i>
Dr. P. P. CALVERT	<i>Entomology.</i>
Professor ALLEN J. SMITH.....	<i>Helminthology and General Medical Zoölogy, and Pathology; Director of the Courses.</i>
Dr. DAMASO RIVAS	<i>Assistant Director of the Courses.</i>
Dr. WILLIAM PEPPER	<i>Tropical Medicine.</i>
Professor G. E. DE SCHWEINITZ..	<i>Ophthalmology.</i>
Professor M. B. HARTZELL.....	<i>Dermatology.</i>
Dr. G. P. MÜLLER.....	<i>Surgical Applications.</i>

The University of Pennsylvania in organizing courses of instruction in Tropical Medicine had in mind not only the need for special opportunity in these lines for practitioners of medicine in the semi-tropical surroundings of our Southern States and outlying territories, but in view of the rapid extension of American commerce into tropical regions realizes the existing and increasing need for medical men with suitable preparation in the extending spheres of American influence in tropical America and the far East. The comparatively large number of students from Central and South America also has appealed to the authorities as a reason for an attempt to more fully

deal with the conditions which such a class of students is certain to meet in their homes when engaged in practice.

For these reasons a course of instruction, which it is hoped will eventually develop into the fullest realization of the desires of the University authorities, has been organized. The fundamental features are particularly dwelt upon as the really essential parts of such a special course of instruction. Philadelphia is not so situated geographically and not possessed of such commercial relations that there may be predicted at all times such number and type of clinical subjects as must be desirable for the full illustration of the various affections to be dealt with; yet there are available, now in one, now in another hospital of the city, which has permitted the University to make use of the material for teaching purposes, a very fair number of cases of the more common and important affections dealt with, exclusive of those which by law are not permitted entrance to the city from the ship-quarantine guarding the port. In all other divisions of the course than the exhibition of clinical cases it is hoped that ultimate development will leave little to be seriously criticised and much in all of the different lines of instruction which will be found commendable.

It has been determined to offer a course of study extending over a period of fifteen weeks and embracing not less than ten units of work,* at the completion of which period a certificate of attendance is granted, signed by the Provost and Vice-Provost of the University and by the Dean of the Medical School and the Director of the Courses in Tropical Medicine, to all those matriculates who have been in full attendance and who satisfactorily pass examinations in the various branches scheduled for the Courses in Tropical Medicine. To such persons as may have elected individual branches in the course and who satisfy similar requirements for the branch or branches attended, a certificate will be granted for the subject or subjects completed, signed by the Director of the Courses in Tropical Medicine and by the Instructor in the subject in question.

These courses are open to any reputable graduate in Medicine and to students of Medicine who may elect them. The requisite ten units for the certificate may be divided by medical students throughout their period of Medical study, the order of selection to be prescribed by the Dean of the School of Medicine and the Director of the Courses in Tropical Medicine in consultation with the student.

* A unit is constituted by at least two hours of lecture or recitation work each week for the period of fifteen weeks; or by not less than four hours each week laboratory work, ward work or clinical lectures.

The fee for the full course is \$150.00.

Graduates of this school or students in course are admitted at half rate. Fee for individual branches will be given upon application; but will be based upon the rule of not less than \$15.00 for each unit.

Subject.	No. of Units Allotted.	No. Hrs. Systematic Lectures.	No. Hrs. Clin. Lect. or Lab. Wk.	Lecturer.
Med. Climatology and Geography..	0.5	15	—	Abbott
Hygiene of Tropics and of Ships.....				
Tropical Medicine....	2.0	30	60	Pepper
Skin Diseases of Tropics.....	0.5	8	15	Hartzell
Eye Diseases of Tropics.....	0.5	7	15	de Schweinitz
Protozoölogy.....	1.0	15	30	Wenrich
Arthropods and Dis- ease.....	1.0	15	30	Calvert
Helminthology and Gen. Med. Zoölogy	1.0	15	30	Smith and Rivas
Pathology of Tropical Diseases.....	2.0	30	60	Smith and Rivas
Bacteriology of Trop- ical Diseases.....	1.0	—	60	Abbott
Surgery of Tropical Diseases.....	0.5	7	15	Müller

For further information address, Director of Courses in Tropical Medicine, School of Medicine, University of Pennsylvania.

4.—THE DEPARTMENT OF RESEARCH MEDICINE.

RICHARD M. PEARCE, M.D.....*Professor of Research Med-
icine.*

E. B. KRUMBHAAR, M.D.....*Assistant Professor of Re-
search Medicine.*

HARRY DUBIN, Ph.D.....	<i>Assistant in Research Medicine.</i>
O. H. PERRY PEPPER, M.D.....	<i>Associate in Research Medicine.</i>
T. GRIER MILLER, M.D.	<i>Associate in Research Medicine.</i>
ALAN C. WOODS, M.D.....	ROBERT ROBINSON PORTER <i>Fellow</i> <i>in Research Medicine.</i>
JAY McLEAN, B.S.....	ROBERT M. GIRVIN <i>Fellow in Re-</i> <i>search Medicine.</i>

This department, established in 1910 by specific endowment, has for its object the investigation of problems in clinical medicine by means of the fundamental medical sciences. It is equipped in such a way that the methods of chemistry, physiology, pathology, bacteriology and pharmacology may be applied to any clinical problem, with special provisions for distinctly experimental investigation, as well as for observation on patients in the wards of the University Hospital. Opportunity for investigation will be given to instructors in the clinical departments of the Medical School and to properly prepared practitioners and students. Although essentially a research department, the department will give a limited amount of elective undergraduate instruction in special subjects.

5.—HENRY PHIPPS INSTITUTE.

The Henry Phipps Institute for the Study, Treatment and Prevention of Tuberculosis is intended for the threefold object of research in tuberculosis, of instruction, and as a benefaction to the needy afflicted by tuberculosis. Its research and other activities are in charge of a special directorate (v. p. 104); and under appropriate regulations graduate work in its special lines of operation is afforded properly prepared students of this disease. Its possibilities have been decidedly augmented since the completion of the new building in May, 1913. Laboratory facilities, clinical opportunities for study and practice in sociology among the tuberculous are offered. Information may be had by addressing either the Dean of the School of Medicine or the Executive Director of Phipps Institute.

6.—WILLIAM PEPPER LABORATORY OF CLINICAL MEDICINE.

Under appropriate regulations and under approval of the Director of the Laboratory, the facilities of this department (v. p. 102) are extended to graduate students.

7.—FELLOWSHIPS.

THE THOMAS A. SCOTT FELLOWSHIP IN HYGIENE was established in 1892 for the purpose of aiding talented students who desire to be-

come investigators or teachers in the field of sanitary science. The holder of the Fellowship receives a remuneration of \$1000 per annum. The appointment is made by the Director of the Laboratory of Hygiene subject to the approval of the Provost and the Board of Trustees.

THE GEORGE B. WOOD FELLOWSHIP IN HYGIENE was established in 1912. It is designed to train teachers of Public Hygiene. The holder is expected to devote a year to assisting in class room instruction, in giving demonstrations illustrating special lines of investigation that he may be carrying on during the year. The holder of the Fellowship receives the remuneration of \$700 per annum. The appointment is made under the same conditions as those applying to the Thomas A. Scott Fellowship.

General regulations regarding the above two Fellowships will be found on page 522 of the general catalog.

THE WOODWARD FELLOWSHIP IN PHYSIOLOGICAL CHEMISTRY (see page 103).

FELLOWSHIPS IN RESEARCH MEDICINE.

THE ROBERT ROBINSON PORTER FELLOWSHIP IN RESEARCH MEDICINE was established in 1912 for the purpose of offering an opportunity to individuals who desire to devote a year or more to investigation in the Medical Sciences. The holder of the Fellowship receives a remuneration of \$600 per annum. The appointment dates from July 1st of each year and the award is made by the Professor of Research Medicine subject to approval by the Board of Trustees.

THE ROBERT M. GIRVIN FELLOWSHIP IN RESEARCH MEDICINE was established in 1913. Its purpose is similar to that of the Porter Fellowship and appointment is made in the same way. The compensation is \$650.

THE HENRIETTA HECKSHER FELLOWSHIP IN MEDICAL RESEARCH was established in 1913 for the purpose of offering an opportunity to individuals who desire to devote at least one-half of their time to medical research under the direction or supervision of the Professor of Medicine for a period of at least one year. The holder of the Fellowship receives a remuneration of about \$500 per annum. The award is made by the Professor of Medicine subject to approval by the Board of Trustees.

The term research shall be strictly construed and shall not include teaching or other work not tending to enlarge the boundaries of medical knowledge.

PART V.

BUILDINGS AND EQUIPMENT.

LABORATORIES OF PATHOLOGY, PHYSIOLOGY AND PHARMACOLOGY.

The LABORATORIES OF PATHOLOGY, PHYSIOLOGY and PHARMACOLOGY were formally opened June, 1904. This building is unsurpassed in facilities and equipment for graduate and undergraduate work. The building is two stories in height, above a high basement, and measures 340 feet front by nearly 200 feet in depth. The long front faces north, securing a maximum amount of light for laboratory purposes. All along the front are arranged small rooms for research, rooms for professors and their assistants, libraries, etc., these opening into a private corridor so that those employed in these rooms may be free from interruption by persons passing through the main halls. Perfect lighting of all the laboratories has been obtained through the front or through large courts, which separate the two main parallel groups of rooms.

In the basement of the building the entire north front is occupied by the research laboratories of the department of physiological chemistry; the west wing to the museum of applied anatomy, the laboratories of operative surgery, bandaging and operative obstetrics. In the southern portion are various rooms for prosection and anatomical and pathological preparation; and the large laboratory of pharmacy.

The first floor of the building is devoted to physiology and pharmacology and to the laboratories of research medicine. The portion assigned to the first consists of laboratories for practical instruction, for general research work, for subsection teaching, rooms for the professor and assistants, etc. The section for pharmacology consists of a large general laboratory for teaching practical pharmacology, rooms for original research, etc. An equivalent portion of the southern part of this floor is given to the laboratories of research medicine. The second floor is devoted mainly to pathology, the entire north front being given over to laboratories for advanced students in pathology, professors' rooms, administrative offices and to the special research and assistants' rooms. The wings accommodate the laboratory of experimental pathology, the museum, the dem-

onstration-room and the laboratory of comparative pathology and tropical medicine. The front of the laboratory of normal and pathological histology consists almost entirely of glass and looks north into a spacious court. Another section of this floor, also looking into the court, is subdivided into smaller laboratories for instruction in neuropathology and surgical pathology, and in osteology.

Besides numerous laboratories, research-rooms, etc., there are four lecture-rooms in the building, two of these being demonstration-rooms with a seating capacity of 185; the others being lecture-rooms with a seating capacity of 300. The building is entirely fireproof, of the most modern construction, supplied with power, electric light, and many kinds of accessories for promoting the teaching and research work.

LABORATORIES OF CHEMISTRY AND ANATOMY.

The CHEMICAL LABORATORIES occupy the first, second and third floors of the Robert Hare Laboratory building; on the second floor is the laboratory of general chemistry, and on the third floor that of physiological chemistry. In addition to the main rooms, there are smaller rooms, provided with an adequate number of balances for quantitative work, and special rooms set apart for research.

The ANATOMICAL LABORATORY is at the top of the building and is 140 feet in length by 40 feet in width. It is lighted by windows on all sides, and by skylights. The most perfect ventilation is thus secured. There are numerous washstands, with hot and cold water, and private closets for the use of each student. Cleanliness is rigidly enforced. The cadavers furnished the dissecting-room are preserved by refrigeration. Dissection is legalized in Pennsylvania.

LABORATORY OF HYGIENE.

ALEXANDER C. ABBOTT, M.D., *Director.*

The LABORATORY OF HYGIENE was formally opened on February 22, 1892. The building was the gift of the late HENRY CHARLES LEA, of Philadelphia, and the equipment was provided through the munificence of the late HENRY C. GIBSON, of Philadelphia. The building is devoted to graduate and undergraduate work in bacteriology, hygiene and preventive medicine. The student laboratory is a commodious, well-lighted and heated room, with a seating capacity for eighty-six students. Each student is supplied with an individual microscope, and with such apparatus as is necessary to conduct elementary studies in Bacteriology.

CLINICAL LABORATORY.

Several years ago an extension was made to the University Hospital to accommodate the medical dispensaries, medical amphitheatre and clinical conference-room, and on the top floor two large laboratories for the teaching of clinical pathology and for the routine laboratory investigation of the hospital cases. The larger room is equipped with desks for the use of the fourth-year students, giving accommodations for 150 men. Each student of the fourth-year class is assigned a desk and is supplied with an outfit including all the ordinary apparatus required in the examination of blood, urine, stomach contents and other secretions or excretions. He is required to supply himself with a microscope so that he will be enabled to conduct all clinical examinations on cases assigned to him in the hospital wards or elsewhere.

Adjoining the fourth-year laboratory is a smaller room equipped in a similar manner and capable of accommodating fifty students each with a working desk. Members of the third-year class are here instructed in clinical laboratory methods. The class is divided into four sections, each of which is assigned one day per week throughout the year. The course covers completely the important laboratory methods of investigation of blood, urine, stomach contents, pathological exudates, secretions, excretions, etc.

A third room accommodates the Staff Laboratory, where the Pathological Resident of the hospital, under the direction of an Instructor, carries on all the preliminary examinations of materials sent from the wards, makes all blood examinations, Widal tests, etc. Subsequent examinations are often made by students of the fourth-year class to whom the cases in the wards are assigned under suitable direction.

WISTAR INSTITUTE OF ANATOMY AND BIOLOGY.

MILTON J. GREENMAN, M.D., Sc.D., *Director.*

HENRY H. DONALDSON, Ph.D., Sc.D., *Professor of Neurology.*

HELEN D. KING, Ph.D., *Assistant Professor of Embryology.*

SHINKISHI HATAI, Ph.D., *Instructor in Neurology.*

J. MACPHERSON STOTSENBURG, M.D., *Instructor in Anatomy.*

CHESTER H. HEUSER, Ph.D., *Fellow in Anatomy.*

CLARA N. PERINE, *Librarian.*

C. BOWYER VAUX, *In charge of Publications.*

The WISTAR INSTITUTE, incorporated in 1892 by the University of Pennsylvania and General Isaac J. Wistar, is the first American Uni-

versity Institute devoted to advanced study and research in anatomy and biology.

Through the munificence of the late General Isaac J. Wistar the Institute was established and endowed not only for the advancement of research in anatomy, but also for the preservation and increase of the anatomical museum originally known as the Wistar or Wistar and Horner Museum. The original museum, founded in 1808 by Professor Caspar Wistar, was used as a teaching museum for students of medicine in the University of Pennsylvania. Its development along broader lines, since the organization of the Institute, has greatly increased its scientific value both to the medical students of the University and to biological students throughout the country. It has now become the depository for research materials which are open, under suitable regulations, to the use of capable investigators from all Institutions, and through its Advisory Board it has established itself as a central anatomical institute.

The Museum is open to the public as well as to students daily, except Sundays and holidays, from 9 A. M. to 4 P. M., Saturdays from 9 A. M. to 12 M.

Well equipped laboratories and a biological library adjoin the Museum and every facility is provided here for the work of investigators. The chief resources of the Institute are, at the present time, directed to researches in Comparative Neurology, Comparative Embryology and Genetics. No undergraduate teaching is done in the Institute, but arrangements can be made with the Director whereby advanced students or graduates in medicine may be afforded the facilities for research offered by the Wistar Institute.

The Institute publishes the five principal, independent anatomical journals of the United States, namely: *Journal of Morphology*, *The Journal of Comparative Neurology*, *The American Journal of Anatomy*, *The Anatomical Record*, and *The Journal of Experimental Zoölogy*. In these journals appears a large portion of the anatomical research work done in this country. In addition the Institute also publishes a series known as *Memoirs of the Wistar Institute*, in which appear such monographs as are too extensive to be published in the journals; and the *Bulletin of the Wistar Institute* published at irregular intervals and containing material relating more especially to the work of the Institute.

WILLIAM PEPPER CLINICAL LABORATORY.HEBBERT FOX, M.D., *Director.**Associates.*

SAMUEL S. KNEASS, M.D.,	THOMAS A. COPE, M.D.,
DANIEL J. MCCARTHY, M.D.,	BENJAMIN A. THOMAS, M.D.,
FRANK B. LYNCH, M.D.	

Volunteer Associates.

WILLIAM PEPPER, M.D.,	ALFRED OSTHEIMER, M.D.,
O. H. PERRY PEPPER, M.D.,	JOSEPH C. BIRDSALL, M.D.,
ROBERT G. TORREY, M.D.,	J. H. AUSTIN, M.D.,
A. H. HOPKINS, M.D.,	F. G. HARRISON, M.D.

WOODWARD *Fellow in Physiological Chemistry.*

LEON JONAS, M.D.

Resident Pathologist.

D. L. FARLEY, M.D.

The WILLIAM PEPPER LABORATORY OF CLINICAL MEDICINE, erected through the generosity of the late Dr. William Pepper as a memorial to his father, adjoins the University Hospital. The purposes of the Laboratory are: to promote the interests of the patients by providing facilities for the prosecution of minute clinical studies and original researches, and to advance the interests of science by the publication of the results of such work. No instruction in the Laboratory is given to undergraduates.

The Associates and Volunteer Associates of the Laboratory are appointed for the purpose of carrying out certain lines of investigation for which they have special preparation. The Laboratory does not solicit post-graduate teaching, but has received a limited number of post-graduate students from time to time for the purpose of training them to carry on investigations.

The publications of the Laboratory are issued in the form of contributions, which are collected reprints of articles issued from the Laboratory and published in various medical journals. One or two numbers, containing from fifteen to twenty or more separate articles, appear each year. A limited number of these may be had by interested persons on application.

The Woodward Fellowship in Physiological Chemistry was founded by George Woodward, M.D., to be filled by election by the Board of Managers of the Hospital of the University of Pennsyl-

vania upon nomination by the Director. The incumbent shall give his full time to work in Physiological Chemistry at the Laboratory and publish only from it, under the Laboratory imprint.

THE UNIVERSITY HOSPITAL.

MR. THOMAS S. GATES
 DR. THOMAS G. ASHTON
 MR. ROBERT E. HASTINGS
 MR. GEO. H. MCFADDEN
 MR. ARTHUR L. CHURCH
 MR. WM. W. CURTIN
 DR. SAMUEL D. RISLEY
 MR. THOMAS REATH
 MR. THOMAS ROBINS
 MR. A. A. JACKSON
 MR. CHARLES L. BORIE
 MRS. WM. W. ARNETT
 MRS. CHANCELLOR C. ENGLISH
 MR. JOHN C. BELL

Board of Managers of University Hospital.

The UNIVERSITY HOSPITAL is situated on the University Campus. It is one of the most important agents in the training of the students, an invaluable adjunct to the School of Medicine, and, together with the Out-Patient Department, furnishes ample provision for the teaching of clinical medicine according to the most approved methods. With accommodations for 400 patients, it also affords excellent facilities for bedside instruction. The Hospital Staff are all members of the Faculty of Medicine.

Eight positions as internes in the University Hospital are awarded annually to eight members of the Graduating Class of the School of Medicine, selected from the twenty-five full time members of the class who have had the highest general average at the end of the third year of the course and from a like percentage or fraction of the men admitted to advanced standing ranked on their third year average.

The MATERNITY PAVILION, with a capacity of 50 beds, comprises a main building, to which the patients are admitted two weeks before delivery, two wings containing delivery rooms, and the ANNA DIKE SCOTT Amphitheatre. This department is under the charge of the Professor of Obstetrics. Under the supervision of the clinical staff, the students assist in cases of labor and make daily visits, during the puerperium, to the mother and child.

Four third-year students sleep in a dormitory near at hand and are summoned at night to see all cases of labor, etc.

The Maternity Pavilion and the Surgical Wing of the Hospital are being at present greatly enlarged. On the completion of these new additions, the capacity and equipment of the hospital will be much increased.

THE HENRY PHIPPS INSTITUTE.

UNIVERSITY COMMITTEE ON PHIPPS INSTITUTE.

PROVOST E. F. SMITH,	MR. THOMAS ROBINS,
MR. S. F. HOUSTON,	DR. CHARLES J. HATFIELD,
MR. ARTHUR L. CHURCH,	DR. ALFRED STENGEL,
MR. R. A. F. PENROSE, JR.,	DR. A. C. ABBOTT,
MR. GEORGE E. GORDON,	DR. ALLEN J. SMITH,
MR. WILLIAM H. HUTT, JR.	

ADVISORY COUNCIL.

- DR. SAMUEL G. DIXON, *Commissioner of Health of Pennsylvania, ex-officio,*
- DR. WILMER KRUSEN, *Director, Department Public Health and Charities, Philadelphia, ex-officio,*
- MR. WILLIAM H. BALDWIN, *Washington,*
- DR. HERMANN M. BIGGS, *New York,*
- DR. LAWRASON BROWN, *Saranac Lake,*
- DR. LIVINGSTON E. FARRAND, *Boulder, Col.,*
- DR. SIMON FLEXNER, *New York,*
- DR. SAMUEL McCUNE LINDSAY, *New York,*
- MR. FREDERICK L. HOFFMAN, *Newark, N. J.,*
- DR. JAMES ALEXANDER MILLER, *New York,*
- DR. JOSEPH H. PRATT, *Boston,*
- DR. THEOBALD SMITH, *Princeton, N. J.,*
- DR. WILLIAM H. WELCH, *Baltimore,*
- DR. H. GIDEON WELLS, *Chicago.*

CONSULTING STAFF.

- DR. ALFRED STENGEL, *Consulting Physician,*
- DR. EDWARD MARTIN, *Consulting Surgeon,*
- DR. T. B. HOLLOWAY, *Consulting Ophthalmologist,*
- DR. D. J. MCCARTHY, *Consulting Neurologist,*
- DR. J. B. CARNETT, *Consulting Surgeon.*

STAFF.

DR. CHARLES J. HATFIELD, *Executive Director.*

Clinical and Sociological Department.

DR. H. R. M. LANDIS, *Director.*

Instructors.

DR. FRANK A. CRAIG,

DR. JOHN M. CRUCE,

DR. C. M. MONTGOMERY.

Clinical Assistants.

DR. ISADORE KAUFMAN,

DR. B. MEREDITH MCINTIRE,

DR. MAURICE M. JACOBS,

DR. HENRY M. MINTON,

DR. J. M. STERLING,

DR. CLARENCE D. SMITH.

Laryngologists.

DR. SIDNEY L. OLSHO,

DR. H. K. LONGSHORE.

Gynecologist.

DR. C. C. NORRIS.

Social Workers.

MISS LUCINDA N. STRINGER,

MISS ABIGAIL M. STOUT,

MISS MARY L. COOK,

MISS AMY SEIFERT.

Superintendent of Hospital.

MISS JESSIE N. JONES.

Pathological Department.

DR. PAUL LEWIS, *Director,*

MR. ROBERT B. KRAUSS, *Research Assistant in Chemistry,*

MR. EDWARD CREDE, *Research Assistant in Chemistry,*

MR. HENRY W. LE BOUTILLIER, *Assistant in Chemistry.*

The Henry Phipps Institute for the study, treatment and prevention of tuberculosis was established in 1903 by Mr. Henry Phipps, of New York, at Third and Pine Streets, Philadelphia. The situation was chosen as being in a section of the city in which tuberculosis was most prevalent, and was made possible by a special law permitting the establishment of the Hospital within the city limits.

In February, 1910, Mr. Phipps transferred the Institute to the University of Pennsylvania, having previously engaged to erect an appropriate permanent building for its accommodation upon grounds gradually acquired with this in view. The new building, located

at Seventh and Lombard Streets, was completed in May, 1913. It is a beautiful and commodious edifice and embodies the most modern ideas of hospital, sanatorium and laboratory construction. The Institute is the first fully organized and equipped institution of the kind with University connection. An entire reorganization of the plan of work has been made by the University. The work is divided into distinct fields of activity, represented by two corresponding departments, the Laboratory or Research Department, and the Clinical and Sociological Department, each under its special director. An Advisory Council of fourteen members has been selected, composed of the most distinguished men of the country in the lines of work carried on by this Institute, who visit the Institution at least once each year.

On account of its connection with the University, the Institute offers facilities for study to the students of the University of Pennsylvania, especially those of the Medical School. Both by visits to the Institution and through the publication of the results of its investigations and research, the Institute has proven valuable both to students and physicians throughout the country interested in this special work.

LIBRARY FACILITIES.

The basis of the Medical Section of the University Library is formed by the Stillé Collection, presented by the late Alfred J. Stillé, to which additions have been made from the William Pepper Medical Foundation established by the late Dr. William Pepper. The section of Dermatology has been much enriched by the addition of the large and valuable library of the late Dr. Louis A. Duhring, who died on May 8, 1913, leaving his library, dermatological specimens, etc., to the University, together with funds for keeping up these collections. In addition to purchases, the Medical Section has grown considerably through gifts presented by a number of medical publishers, more particularly Messrs. W. B. Saunders, the J. B. Lippincott Company, Lea & Febiger and P. Blakiston's Son & Co. From most of these are received regularly the new publications issued by them. In addition to these, the University subscribes to about one hundred medical periodicals, which represent a choice selection of the leading medical periodicals of this country and Europe. Through special funds the sets of all the more important periodicals and publications of medical societies have been completed.

The PEPPER MEDICAL ALCOVE contains sets of the more important medical periodicals, general reference works covering the various

departments of medicine and surgery, text-books, serial publications and all the more important new medical books received at the University.

A Departmental Library in the Medical Laboratory Building contains many text-books and periodicals transferred to it from the General University Library, and recently has received through bequest the surgical library of the late Dr. J. Wm. White and the physiological library of the late Dr. Isaac Ott.

LIBRARY OF THE COLLEGE OF PHYSICIANS OF PHILADELPHIA. In addition to the Medical Section of the University Library, students have access to the Library of the College of Physicians, the second largest medical library in the United States.

PART VI.

GENERAL INFORMATION.

ARRANGEMENT OF SESSION.

The academic year consists of one session, beginning on the last Friday in September, and ending at Commencement on the third Wednesday in June.

ACCOMMODATIONS FOR STUDENTS.

For information about students' dormitories, board and lodging, apply to Bursar's Office, College Hall.

TUITION FEES AND EXPENSES.

Under no circumstances are any changes made in the established fees.

First term fees are payable upon date of matriculation.

It is expected of every student, either before or by the time of entrance to the second-year class, that he will provide for himself, either by purchase, rental or otherwise, a microscope of a grade suitable for general medical work.

First Year.

Matriculation fee	\$5.00
For general tuition ticket, admitting to all the lectures, and including all the laboratory work assigned to this year	\$200.00
Use of dissecting material (<i>four parts</i>)	\$2.00 a part.
Gymnasium and Houston Club fee	\$10.00

Second Year.

For general tuition ticket, admitting to all the lectures, and including all the laboratory work assigned to this year	\$200.00
Gymnasium and Houston Club fee	\$10.00

Third Year.

For general tuition ticket, admitting to all the lectures, and practical courses assigned to this year.....	\$200.00
Gymnasium and Houston Club fee	\$10.00

Fourth Year.

For general tuition ticket, admitting to all the lectures, and the practical courses assigned to this year (no graduation fee)	\$200.00
Use of material for operations in surgery.....	\$4.00 to \$6.00
Gymnasium and Houston Club fee	\$10.00

FEES FOR SPECIAL COURSES OF THE GENERAL CURRICULUM.

(Students taking special or partial courses, if not already matriculated, or if not graduates of the School, are required to pay the matriculation fee in addition to the fees named below.)

For any single course of lectures	\$20.00
For practical course in the Chemical Laboratory	25.00
For the course in Practical Gynecology of the fourth year...	25.00
For any one of the remaining practical courses	15.00

For practical courses in special classes a minimum fee of \$25.00 will be charged, this fee increasing in proportion to the material required and special attention demanded in instruction.

Graduates in Medicine of this University are admitted to the courses free of charge; but they are required to pay for any laboratory material which they may use.

Fees for Courses in Public Hygiene and in Tropical Medicine.

General fee for the course in Public Hygiene, including diploma	\$150.00
For single branch of this course	\$25.00
Regular deposit, to cover breakage, etc., for entire course, or single branch	\$10.00
General fee for course in Tropical Medicine	\$150.00
Fee for single branch of this course from.....	\$15.00 upward
Fee for single graduate course in Phipps Institute from	\$50.00 upward

RULES IN RELATION TO FEES.

All payments should be made to W. O. Miller, Bursar, Room 102, College Hall.

A matriculation fee of \$5.00 must be paid by all new students entering the University.

Late Registration Fee.—Beginning in September, 1917, students in the Medical School, who fail to register, or to complete registration by the satisfaction of all term obligations at the Bursar's Office,

within two weeks after the opening day of either term of the University, shall be required to pay an additional fee of Five Dollars (\$5.00) for late registration.

If a student is transferred from one department to another, a second matriculation fee shall not be paid.

Every student shall upon entering the University make a deposit of \$10.00 to cover loss, damage, or breakage of University property, library fines, or any charge not paid by the student in some other way. A student whose deposit is by charges against it reduced to \$2.50 or less shall be required to pay a sum sufficient to restore the deposit to its original amount. No deposit or balance remaining on a deposit shall be finally repaid to a student until he shall have been graduated or shall have formally withdrawn from the University.

A student who repeats the studies of the year will be required to pay the full tuition fee.

ALLOWANCES IN CASE OF WITHDRAWAL, ETC.

A student who leaves the University within thirty days after the beginning of either the first or second term, and who shall have paid the full term's tuition fees may receive a return of one-half of the tuition fees paid, but in no case shall the matriculation fee be returned.

EXAMINATIONS.

First Year.—The mid-year examination in Anatomy (including Osteology, Syndesmology, Myology, and such other subjects as may have been covered by the lectures on Anatomy before February 1), and final examination in Physiological Chemistry are held about February 1.

Final examinations at end of year: Anatomy and Bacteriology.

Second Year.—Examinations in Physiology, Pathology and Pharmacology will be held about February 1.

Final examinations at the end of the year in Physiology, Pathology, Pharmacology and Toxicology.

Third Year.—Examinations in Ophthalmology and Hygiene will be held about February 1.

Final examinations at end of year: Medicine, Surgery, Obstetrics, Therapeutics, Applied Anatomy, Pathology and Third-year Specialties (Laryngology, Otology and Dermatology).

Fourth Year.—

Final examinations at end of year: Medicine, Surgery, Obstetrics, Gynecology and Fourth-year Specialties (Neurology and Neuropathology, Mental Diseases, Pediatrics and Genito-Urinary Surgery).

GRADUATION.

At the end of the fourth year a student who has passed all the required examinations satisfactorily will receive the degree of Doctor of Medicine under the following provisions:

1. He must be 21 years of age, and of good moral character.
2. He must have passed satisfactory examinations in all of the required branches of the curriculum, must have attended the practical instruction in all departments, and his last year of instruction must have been at this school.
3. He must have attended at least twelve cases of Obstetrics.
4. He must be present at Commencement, unless excused by the Dean of the Faculty.

SCHOLARSHIPS.

I. UNIVERSITY SCHOLARSHIPS. A competitive examination of candidates who have been accepted for enrollment in the Medical School, to fill three free scholarships is held annually. (In 1917, beginning on Monday, September 24, at 10 A. M., and continuing on the two following days in the Medical School.)

Detailed information about these scholarships may be had upon application to the Dean of the School of Medicine. Each candidate will be required:

First. To have satisfied the entrance requirements as stated on pages 29-33, and to have been accepted for enrollment.

Second. To furnish satisfactory evidence in writing, from three reputable persons, that he is without means to defray the expenses of a medical education.

Third. To write a brief autobiography of about 300 words in length, which will serve as a test of his qualifications in orthography and grammar. This is to be written on Monday, September 24, at 10 A. M.

Fourth. To undergo examinations in the following subjects:*

- (a) Latin (second and fourth books of Horace's *Odes*.)
- (b) Greek (first four books of the *Iliad*.)—The examination will include prosody, syntax and Homeric dialect.

* A percentage of not less than 50 must be obtained in each one of the subjects in which a competitor undergoes examination, and an average percentage of at least 70 must be obtained on the whole examination that a competitor may have his name placed upon the eligible list. The appointments will be made from this eligible list.

- (c) French.—Elementary French, including grammar, prose composition (Joynes' *Minimum French Grammar and Reader*), and reading at sight in books of the grade of the following:

Francisque Sarcey, *Le Sièg de Paris*.

Beaumarchais, *Le Barbier de Séville*.

Anatole France, *Le Crime de Sylvestre Bonnard*.

- (d) German.—Elementary German, including Learned's *German Grammar*, Wesselhoeft's or Harris' *Prose Composition*, and reading at sight in books of the grade of the following:

Heine's *Harzreise*.

Eichendorff's *Aus dem Leben eines Taugenichts*.

Wildenbruch's *Das edle Blut*.

2. Any two of these three sciences:

- (a) Physics. (As in Gage's *Principles of Physics*—Goodspeed's *Revision*, Crew's *General Physics*, or Duff's *Text-book of Physics*.)
- (b) Chemistry. (General; as in Richter's *Inorganic Chemistry* or its equivalent. Qualitative Analysis, including bases and acids with separations, as in Medicus *Qualitative Analysis*.)
- (c) Zoölogy or Biology. (Zoölogy as in Galloway's *Text-book of Zoölogy* or Hegner's *College Biology*. Biology as in Needham's *General Biology*.)

Fifth. To pay an examination fee of \$5.00, which is not returned, but is accepted as the matriculation fee in case the candidate is successful.

Candidates who propose presenting themselves for examination, must present the certificates demanded by the second requirement of the competition, to the Dean *before September 10*. This requirement having been complied with, candidates will appear without further notice at the time stated for examinations.

II. PHILADELPHIA FREE SCHOLARSHIPS.—Under an agreement with the city of Philadelphia, fifty free scholarships exist in the University for the benefit of graduates of the public schools. The candidates for these scholarships are examined by the Board of Public Education, and award is made to those who reach the highest grade, as vacancies occur from year to year.

Under another agreement with the city of Philadelphia, seventy-five free scholarships exist in the University for the benefit of gradu-

ates from local schools in general. Information regarding the latter scholarships should be obtained from the Mayor's Office.

III. In addition, certain non-competitive scholarships are available, reference to which will be found on pages 217-221 of General Catalogue.

PRIZES TO BE AWARDED, JUNE, 1918.

NOTE.—*Theses and Reports in competition for Prizes must be presented to the Dean on or before May 1. Prizes will not be awarded unless the work submitted reaches a high standard of excellence.*

THE ALUMNI MEDAL and a prize of \$50.00 is offered by the Society of the Alumni of the School of Medicine of the University, to the member of the Graduating Class who attains the highest general average in examinations. (Only those members of the Graduating Class who have taken the last three years of the course in Medicine at this University are eligible.)

THE DR. SPENCER MORRIS PRIZE.—The annual income, derived from the investment of Ten Thousand Dollars, will be awarded each year to that Medical Student of the Graduating Class who shall pass the best examination for the degree of Doctor of Medicine.

THE FREDERICK A. PACKARD PRIZE of One Hundred Dollars is offered by a friend of the University to the member of the Graduating Class who has proven himself to be the most proficient in the course in Clinical Medicine.

The Professor of Obstetrics offers a Prize of an obstetrical forceps to the member of the Graduating Class who furnishes the best report of a case of Obstetrics occurring in the University Maternity Hospital.

A Prize of a completely equipped obstetrical bag is offered by the Professor of Obstetrics to the member of the fourth-year class presenting the best notes on the conferences and clinics of the fourth year in Obstetrics.

DR. A. O. J. KELLY PRIZE FUND.—Founded March 26, 1912, by contributions from friends of Dr. A. O. J. Kelly, deceased. The Kelly Prize will be given to a member of the Fourth Year Medical Class who has made an especially meritorious report of some clinical observation in his regular University work.

CHARLES A. OLIVER MEMORIAL PRIZE.—Founded June 16, 1913, by Dr. Charles A. Oliver. This Prize, in the form of a gold medal, will be given to "those students in the Graduating Class in the Department of Medicine who shall annually receive the highest average and pass the best examination in Ophthalmology."

APPOINTMENTS TO HOSPITAL.

The school strongly advises each graduate to undertake a term of service as interne in some good general hospital. Practically the entire class of 1916 have received appointment by competitive examination or otherwise; and there are each year more demands for graduates of the school for such service than can be accommodated.

The Bureau of Medical Education and Licensure of the State of Pennsylvania now requires that all applicants for licensure shall have completed a year as interne in a hospital of specified character.

SOCIETY OF THE ALUMNI OF THE SCHOOL OF MEDICINE.

President.—John K. Mitchell, '83.

Vice-Presidents.—William J. Taylor, '83; Richard C. Norris, '87; S. McC. Hamill, '88; Lewis H. Taylor, '80; Park Weed Willis, '91; William L. Harris, '92; Alexander R. Craig, '93.

Historian.—William Pepper, '97.

Secretary and Treasurer.—Floyd E. Keene, '04.

Executive Committee (for one year).—James Tyson, '63; George E. de Schweinitz, '81; Allen J. Smith, '86; Charles W. Burr, '86; Lewis H. Adler, '88; George C. Ross, '91; George C. Stout, '91.

Executive Committee (for two years).—Edward G. Rhoads, '85; B. Franklin Stahl, '87; Wm. Campbell Posey, '89; George W. Norris, '99; B. A. Thomas, '03; Brooke M. Anspach, '97; Henry P. Brown, Jr., '12.

Executive Committee (for three years).—Charles K. Mills, '69; George A. Piersol, '77; G. G. Davis, '79; Herbert B. Carpenter, '89; J. H. W. Rhein, '90; John G. Clark, '91; Edward A. Shumway, '94.

Directors of General Alumni Society (for one year).—F. E. Keene, '04; M. Howard Fussell, '84; Morris Booth Miller, '89; William T. Shoemaker, '91; Geo. Morris Piersol, '05.

This Society was founded in 1870, and is composed of graduates of the School of Medicine in good standing.

The Society is actively engaged in collecting detailed information regarding the Medical Alumni, and is now preparing a matriculate catalogue which will contain the historical data thus acquired.

A special arrangement has been made with the General Alumni Society whereby *The Alumni Register* has become the official organ of this Society; and a joint annual subscription of \$3 will include

membership in both Societies, and one year's subscription to *The Alumni Register*.

Subscriptions should be sent to the Treasurer of the General Alumni Society, 704 Hale Building.

**THE PHILADELPHIA ALUMNI SOCIETY OF THE MEDICAL
DEPARTMENT OF THE UNIVERSITY OF PENNSYLVANIA.**

President.—McCluney Radcliffe, '82.

Honorary Vice-President.—Provost Edgar F. Smith.

Vice-Presidents.—T. J. Ellinger, '79; S. E. Tracy, '98;
J. C. Gittings, '95.

Recording Secretary.—Floyd M. Keene, '04.

Corresponding Secretary.—B. Franklin Stahl, '87.

Treasurer.—Morris B. Miller, '89.

Executive Committee.—H. B. Carpenter, '89; Clarence P. Franklin, '93; D. M. Hoyt, '01; Wm. McKeage, '92;
Harvey E. Schock, '02.

This Society was founded in the spring of 1892 among the alumni of the Medical Department of the University living in and near Philadelphia. The meetings are held on the third Saturday evenings of February, May and November, and are of a purely social character. The membership is composed of graduates of the School of Medicine. Those desiring to become members are requested to send their names to the Secretary. The dues are two dollars per annum.

DEGREES AND PRIZES—1916.

At a public Commencement, held Wednesday, June 21, 1916, at the Metropolitan Opera House, the degree of Doctor of Medicine was conferred by Edgar F. Smith, PH.D., Sc.D., L.H.D., LL.D., Provost, upon the following candidates:

Name.	Post Office.	State.
Alexander, John	Sea Girt	New Jersey.
Allen, Kenneth Dayton Allison.....	University Park	Colorado.
Andrews, Clayton Farrington.....	St. Paul	Nebraska.
Archer, John George, Jr.....	Greenville	Mississippi.
Arnett, John Hancock.....	Philadelphia	Pennsylvania.
Baird, Joseph Shannon.....	Edgerton	Kansas.
Best, Paul Wesley.....	Goldsboro	North Carolina.
Bloomhardt, Samuel Isett.....	Altoona	Pennsylvania.
Boulware, Judson Powell.....	Eminence	Kentucky.
Bucher, Carl Joseph.....	Logansport	Indiana.
Carpenter, Chapin	Pottsville	Pennsylvania.
Cook, Philip Lewis.....	Wyalusing	Pennsylvania.
Costolow, William Evert	Kirksville	Missouri.
Donovan, William Murray	Scranton	Pennsylvania.
Earhart, Samuel Darragh	Medford	Oregon.
Eley, Clayton Willard	Woodland	North Carolina.
Ely, William Cromwell	Philadelphia	Pennsylvania.
Evans, Francis Edgerton	Lima	Pennsylvania.
Fallon, Louis Fleming	Wayne	Pennsylvania.
Farquhar, Howard Lester	West Brownsville ..	Pennsylvania.
Forman, Douglas Newton	East Northfield	Massachusetts.
Francis, Raymond Toot	Sunbury	Pennsylvania.
Giordano, Anthony Angelo Sebastian.	Philadelphia	Pennsylvania.
Greenwell, Albert Wright	Idaho Falls	Idaho.
Harper, Carl Samuel	Madison	Wisconsin.
Hetherington, Ray Russell	Bentleyville	Pennsylvania.
Hinton, Drury	Philadelphia	Pennsylvania.
Hobbs, Louis Lyndon, Jr.....	Guilford College	North Carolina.
Hoebeke, William George	Grand Rapids	Michigan.
Hufford, Henry Kurtz Baumgardner	Reading	Pennsylvania.
James, Fairley Patterson	Laurinburg	North Carolina.
Jena, Milton	Pittsburgh	Pennsylvania.
Jones, Lawrence Jesse	Wilmington	Delaware.
Kohlman, Samuel Hill	Germantown	Pennsylvania.
Kreutzmann, Henry Adolph Robert..	San Francisco	California.
MacDuffie, James Henry, Jr.....	Columbus	Georgia.
MacKinnon, Goff	Seattle	Washington.
McBrayer, Reuben Adolphus	Sanatorium	North Carolina.
Magoun, James Albert Hughes, Jr...	Newark	New Jersey.
Mason, Frederick Raoul	New York City	New York.
Mastin, Edward Vernon Metcalfe....	Mobile	Alabama.
Miller, Milton Valentine	Columbia	Pennsylvania.
Murphy, Douglas Power	Philadelphia	Pennsylvania.

Name.	Post Office.	State.
North, Charles Quay	Punxsutawney	Pennsylvania.
Packer, Jesse E.	Norwood	Pennsylvania.
Pate, James Gibson	Gibson	North Carolina.
Patrie, Harry Hapeman	Red Hook	New York.
Pavy, Albert Berchmans	Opelousas	Louisiana.
Perkins, John Douglas, Jr.	Coatesville	Pennsylvania.
Perkins, Joseph Ashbridge	Coatesville	Pennsylvania.
Phillips, Arthur William	Emlenton	Pennsylvania.
Propst, Walter William	Archibald	Pennsylvania.
Pyle, Louis Apgar	Jersey City	New Jersey.
Reynolds, David Duer	Kennett Square	Pennsylvania.
Rice, Floyd Winnette	Avon	Iowa.
Royster, Thomas Sampson	Townsville	North Carolina.
Scott, Roy Lorraine	Fairchance	Pennsylvania.
Secord, Walter Newton	Newton	Massachusetts.
Sharpe, Frank Alexander	Greensboro	North Carolina.
Shearer, Herbert Benjamin	Dublin	Pennsylvania.
Shoemaker, Robert, 3rd.	Ogontz	Pennsylvania.
Smith, William Alexander	Goldsboro	North Carolina.
Spencer, Robert Douglas	Williamsport	Pennsylvania.
Stroud, William Daniel	Philadelphia	Pennsylvania.
Swindell, Lewis Holmes, Jr.	Swan Quarter	North Carolina.
Tweddel, George Kay	Philadelphia	Pennsylvania.
Vadala, Anthony Joseph	Philadelphia	Pennsylvania.
Vale, Claire Fremont	Somerville	New Jersey.
Vann, Norman St. George.	Charlotte	North Carolina.
Van Winkle, John Shaw.	Paterson	New Jersey.
Waltz, Arthur David	Hepburnville	Pennsylvania.
Werner, Frank Pattison	Orwigsburg	Pennsylvania.
Yoho, Charles Elmer	Elwood City	Pennsylvania.
Zacks, Myron Albert	Erie	Pennsylvania.

Of the foregoing there were from:

Alabama	I	Michigan	I
California	I	Mississippi	I
Colorado	I	Missouri	I
Delaware	I	Nebraska	I
Georgia	I	New Jersey	5
Idaho	I	New York	2
Indiana	I	North Carolina	11
Iowa	I	Oregon	I
Kansas	I	Pennsylvania	36
Kentucky	I	Washington	I
Louisiana	I	Wisconsin	I
Massachusetts	2	—	—
		Total	74

The following received the Degree of DR. PH.:

David Hendricks Bergey, M.D.	Balduin Herman Lucke, M.D.
Dorothy Child, M.D.	Ralph W. Nauss, M.D.
Mary M. C. Longdon, M.D.	Herman Francis Senftner, M.D.
	Annie Young.

Certificates for Partial Course in Tropical Medicine were given to the following:

Animal Parasitology.

Henry Field Smyth.

Pathology of Tropical Medicine.

Ralph W. Nauss,
Herman Francis Senftner,
Annie Young.

Pathology of Tropical Medicine and Animal Parasitology.

William Lehmann.

PRIZES.

THE ALUMNI MEDAL and a prize of \$50.00 is offered by the Society of the Alumni of the School of Medicine of the University, to the member of the Graduating Class who attains the highest general average in examinations. (Only those members of the Graduating Class who have taken the last three years of the course in Medicine at this University are eligible.) To P. W. BEST.

THE DR. SPENCER MORRIS PRIZE. The annual income, derived from the investment of Ten Thousand Dollars, will be awarded each year to that Medical Student of the Graduating Class who shall pass the best examination for the degree of Doctor of Medicine. To JOHN ALEXANDER.

THE FREDERICK A. PACKARD PRIZE, of one hundred dollars, offered by a friend of the University to the member of the Graduating Class who has proven himself to be the most proficient in the course in Clinical Medicine. To JOHN ALEXANDER.

The Professor of Obstetrics offers a prize of an obstetrical forceps to the member of the Graduating Class who furnishes the best report of a case of Obstetrics occurring in the University Maternity Hospital. To JOHN ALEXANDER.

DR. A. O. J. KELLY PRIZE FUND.—Founded March 26, 1912, by contributions from friends of Dr. A. O. J. Kelly, deceased. The Kelly Prize will be given to a member of the Fourth-Year Medical Class who has made an especially meritorious report of some clinical observation in his regular University work. To WILLIAM M. DONAVAN, with honorable mention of L. A. PYLE and M. V. MILLER.

CHARLES A. OLIVER MEMORIAL PRIZE. Founded June 16, 1913, by Charles A. Oliver. This prize, in the form of a gold medal, will be given to "those students in the graduating class in the Department of Medicine who shall annually receive the highest average and pass the best examination in Ophthalmology." To W. G. HOEBEKE.

A prize of a completely equipped obstetrical bag is offered by the Professor of Obstetrics to the member of the Fourth-Year Class presenting the best notes on the conferences and clinics of the fourth year in Obstetrics. To A. A. S. GIORDANO. Honorable Mention of JOHN ALEXANDER.

SCHOOL OF MEDICINE.

GRADUATE STUDENTS.

NAME.	RESIDENCE.	CITY ADDRESS.
Fretz, John Edgar A.M. (Lafayette) M.D. (Pennsylvania)	Easton	
Guggenheim, Louis K. M.D. (Washington Univ.)	St. Louis, Mo.	Hotel Walton
Johnston, Wilson M.D. (Univ. of Louisville)	Spokane, Wash.	Hotel Adelphia
Killeen, John J. M.D. (Univ. of Ill. Col. of Medicine)	Chicago, Ill.	Normandie, 36th and Chestnut Sts.
Kistner, Frank B. M.D. (Univ. of Indiana)	Mulluonich, Ore.	Hotel Walton
Lyman, H. W. M.D. (St. Louis Col. of Phy- sicians and Surgeons)	St. Louis, Mo.	Normandie, 36th and Chestnut Sts.
MacSorley, Harriet E. M.D. (Women's Baltimore Medical College)	Philadelphia	5634 Thomas Ave.
Scroggs, Jos. J. B.S. (Geneva College) M.D. (Pennsylvania)	Beaver	1941 N. Park Ave.
Sondheim, Sidney J. M.D. (Pennsylvania)	Reading	[119 S. 5th St.]
Wells, Walter A. M.D. (Georgetown Univ.)	Washington, D. C.	Bellevue-Stratford Hotel

FOURTH-YEAR CLASS.

Alston, Robert Swan A.B. (Pennsylvania)	Philadelphia	1223 N. 58th St.
Arp, August Henry B.S. (Iowa)	Moline, Ill.	Normandie, 36th and Chestnut Sts.
Bachman, Harry Wilson A.B. (Davidson)	Bristol, Tenn.	Dorm. 19 Thomas Penn
Bachmann, Harrold Albert B.S. (Wisconsin)	Sheboygan, Wis.	3707 Woodland Ave.
Balen, Morris Joseph Bauer, William Waldo B.S. (Wisconsin)	Philadelphia	2169 N. 9th St.
Baughn, Henry Alden B.A. (Ohio State)	Milwaukee, Wis.	3707 Woodland Ave.
Behney, Charles Augustus A.B. (Ursinus)	Washington Court House, Ohio	3437 Chestnut St.
Bentley, John Edward B.S. (Wisconsin)	Philadelphia	2601 Lombard St.
Biddle, Sidney Geoffrey A.B. (Harvard)	Portage, Wis.	3707 Woodland Ave.
Bowen, John Dennis	Philadelphia Binghamton, N. Y.	2017 Pine St. 3728 Wanut St.

NAME.	RESIDENCE.	CITY ADDRESS.
Bowing, Harry Herman B.S. (Earlham)	Richmond, Ind.	3703 Walnut St.
Brockmann, Harry Lyndon	Greensboro, N. C.	do.
Brown, Edwin S. B.S. (Minnesota)	Milton, N. Y.	129 S. 36th St.
Buerki, Robin Carl B.S. (Wisconsin)	Waukesha, Wis.	3703 Woodland Ave.
Burton, Aldrich Robert	Philadelphia	1834 Wharton St.
Cancelmo, Jesse James	do.	115 S. 63d St.
Castelloe, Cola M.A. (Wake Forest)	Aulander, N. C.	3611 Locust St.
Chaney, William Calvert	Chaney, Md.	Dorm. 412 Leidy
Cheyney, Ernest Waldron B.S. (Pennsylvania)	Philadelphia	259 S. 44th St.
Cochrane, Robert Miller	Greensburg	Dorm. 49 Thomas Penn
Connolly, John Michael	Philadelphia	1935 N. 25th St.
Coover, Donald Bruce B.S. (Gettysburg)	Gettysburg	3717 Locust St.
Cox, Russell Mills B.S. (North Carolina)	Washington, N. C.	3605 Locust St.
Dixon, Fred Willis B.S. (Geneva)	Enon Valley	3703 Walnut St.
Espy, Carl Wood	Wilkes-Barre	3918 Spruce St.
Finley, Edmund Leo A.B. (Holy Cross)	Rome, N. Y.	3703 Walnut St.
Foster, John Hess B.S. (Colby)	Burton, Wash.	Dorm. 40 Provost Tower
Frederick, LeRoy Walley	Reading	Dorm. 32 Bishop White
Gockley, Harry Frantz B.S. (Albright)	Myerstown	3327 Walnut St.
Hartman, John Calvin B.S. (Gettysburg)	Gettysburg	3717 Locust St.
Heacock, Charles Hunter A.B. (Bucknell)	Turbotville	3440 Walnut St.
Hill, Rolla Bennett B.S. (Whitman)	Colfax, Wash.	3601 Locust St.
Hillesheim, Clara M.A. (Minnesota)	Sleepy Eye, Minn.	120 S. 34th St.
Jones, Griffith S. B.S. (Wisconsin)	Milwaukee, Wis.	3703 Walnut St.
Jones, Leonidas Leroy B.S. (Wake Forest)	Kenansville, N. C.	3609 Locust St.
Keller, Samuel Harris B.S. (Pennsylvania)	Wilkinsburg	Dorm. 319 Leidy
King, Jonas Earl A.B. (Grove City)	Grove City	3703 Walnut St.
Langdon, Roy Luther	Scranton	[Ferndale Ave., Willow Grove]
Levy, Frank David	Philadelphia	1843 N. 8th St.
Logan, James Stewart B.S. (Westminster)	Pittsburgh	3429 Walnut St.
McCutcheon, Morton A.B. (Pennsylvania)	Germantown	[505 Locust Ave.]
McDonald, Frank Rudd	St. Joseph, Mo.	3703 Walnut St.
McMillan, Thomas Murphy, Jr. A.B. (Princeton)	Mobile, Ala.	Kings Court, 36th and Chestnut Sts.
Marvel, Philip, Jr. A.B. (Yale)	Atlantic City, N. J.	Dorm. 238 Fitler

NAME.	RESIDENCE.	CITY ADDRESS.
Mikelberg, Henry B.	Philadelphia	731 McClellan St.
Miller, George Henry M.A. (Wooster)	Beallsville, Ohio	2601 Lombard St.
Miller, James M. B.S. (Allegheny)	Pittsburgh	Dorm. 41 Mask and Wig
Milligan, Alexander McLeod A.B. (Westminster)	do.	Dorm. 48 Coxe
Moffit, Harold Fred	Altoona	3706 Walnut St.
Moffsesyan, Philipp B.A. (Euphrates)	Armenia	3274 Chancellor St.
Montenegro, Joao Baptista de Freitas		
B. Litt. (McKenzie Col.)	Sao Joao da Bocaina (Sao Paulo), Brazil	121 S. 39th St.
Moon, Herbert Lovelace B.S. (Iowa)	Seattle, Wash.	3435 Walnut St.
Neill, William Alfred	Vancouver, Wash.	3601 Locust St.
Pierson, Frank Solomon	Syracuse, N. Y.	638 N. Franklin St.
Prees, Reginald Lloyd B.S. (Wisconsin)	Cambria, Wis.	3707 Woodland Ave.
Quay, John Edward	Waco, Tex.	3918 Spruce St.
Randall, Edward, Jr. A.B. (Yale)	Galveston, Tex.	Dorm. 320 Leidy
Reinke, Charles Knauss Ph.B. (Lafayette)	Wayne	
Richards, Joseph Francis	Chestnut Hill	[59 Bethlehem Pike]
Rogers, Harry Lincoln	Burlington, N. J.	3604 Walnut St.
Russell, James Andrew Merle	Erie	3429 Walnut St.
Sangree, Henry Karl A.B. (Lafayette)	Philadelphia	1329 Dupont St., Wilming- ton, Del.
Seabold, Paul Seibert	Lebanon	222 S. 38th St.
Shelly, James Acuff	Ambler	3604 Walnut St.
Shipley, Vincent Talbot A.B. (Maryville)	Baltimore, Md.	261 S. 38th St.
Sifre, Ramon Julian	Corozal, Porto Rico	3711 Woodland Ave.
Singletary, George Currie A.B. (North Carolina)	Clarkton, N. C.	129 S. 36th St.
Stepp, Lawrence Lorraine A.B. (Grove City)		
A.B. (Pittsburgh)	Valencia	3601 Locust St.
Stuart, William Baird B.S. (Pennsylvania State)	Carlisle	Dorm. 238 Fitler
Truschel, Eugene John B.S. (Pittsburgh)	Pittsburgh	3601 Locust St.
West, Clifton Forrest B.S. (North Carolina)	Dover, N. C.	3605 Locust St.
Yusif, Shakir A.B. (Assuit College)	Sanabu Via Dyrout, Egypt	225 S. 33d St.

**FORMER MEDICO-CHIRURGICAL STUDENTS NOW BEING TAUGHT
AT SEVENTEENTH AND CHERRY STREETS.**

Albright, Paul Morris	Williamsport	110 N. 20th St.
Anderson, John Thomas A.B. (Lincoln Univ.)	Philadelphia	1512 Christian St.
Antrim, Harold Taylor	do.	1947 N. 13th St.
Baker, Harold F.	do.	1624 Summer St.

NAME.	RESIDENCE.	CITY ADDRESS.
Barosky, Benjamin	Fargo, N. D.	137 N. 19th St.
Basler, William James, Jr.	Kutztown	1607 Race St.
Bay, Percy Albert	Muncy Valley	153 N. 21st St.
Behen, William C.	Dover, Del.	218 W. Logan Sq.
Beisler, Lawrence George	Hilton, N. J.	212 N. 17th St.
Bell, Winfield Sloane	Hannastown	2050 Cherry St.
Bennardi, A. M.	Bradford	Medico-Chirurgical Hospital
Bigoney, Carl Franklin	Lansdale	302 N. 18th St.
Bodine, Francis S.	Wellsboro	1919 Arch St.
Boyle, Joseph P.	Lansford	1529 Green St.
Brennock, Thomas McG.	Albany, N. Y.	218 W. Logan Sq.
Burge, Frank Walton	Philadelphia	4515 Sansom St.
Case, Claude Edward	Doylestown	302 N. 18th St.
Chartock, Samuel	Philadelphia	314 New St.
Chesler, Morris	do.	215 N. 6th St.
Cobham, James L.	New York City	218 W. Logan Sq.
Cooper, Joseph David	Philadelphia	1641 S. Orkney St.
Curd, Kirksey Louis D.V.M. (Cornell)	do.	2053 Bainbridge St.
Davies, Edward I.	Mahanoy City	139 N. 16th St.
Davis, Howard B. F.	East Downingtown	1712 Wallace St.
DeWitt, Edward N.	St. Paul, Minn.	2141 N. 21st St.
Deaver, George Gilbert	Baltimore, Md.	West Branch Y. M. C. A., 52d and Sansom Sts.
Decker, Harold	Montgomery	212 N. 17th St.
Donovan, John Daniel	Renovo	129 N. 16th St.
Dutter, Guy Edward	Hillsgrove	1624 Summer St.
Ellsworth, Elijah Martyn	Kingston	1709 Race St.
Fadil, Iskander Elias	Turkey	1222 S. 10th St.
Finneran, Martin Bernard	Carbondale	110 N. 20th St.
Fisher, Ralph Andrews	Easton	1818 Diamond St.
Fitzgerald, Lawrence Henry	Oak Hill, W. Va.	1323 Green St.
Forsythe, William Alexander	Atlantic City, N. Y.	1512 Christian St.
Frederick, Daniel Francis	Ashley	129 N. 16th St.
Fritz, Edward Adolph	Scranton	119 N. 18th St.
Furlong, Robert Mount	San Rafael, Cal.	1919 Arch St.
Gettemy, Ralston O.	Keffer	1706 Summer St.
Giancontieri, Victor A.B. (Liceo Ximenes Trapony, Italy)	New York City	1323 Brandywine St.
Ginsburg, Gershon	Philadelphia	1807 N. Marshall St.
Grauten, Vincent John	West Chester	1825 Green St.
Gustites, Frank William	Shenandoah	139 N. 16th St.
Hagedorn, Harvey Martin	Philadelphia	4931 Parrish St.
Hanlon, Thomas J.	Mt. Carmel	113 N. Lambert St.
Harman, B. M.	Funchtown, N. J.	1825 Green St.
Heller, James R.	Allentown	139 N. 16th St.
Holland, H. Albert	New Castle	218 W. Logan Sq.
Johnson, F. S.	Camden, N. J.	[635 S. 3d St.]
Johns, Marvin Conrad	Wilkinsburg	737 N. 20th St.
Jones, Walter J.	Rockland, Wis.	110 N. 20th St.
Jones, William H., Jr.	Shaft	119 N. 18th St.
Kachadoorian, Vartan A.B. (Euphrates College, Harpoot, Armenia)	Armenia	1323 Brandywine St.
Kerwin, Charles Martin	West Chester	2141 N. 21st St.
Lanshe, Harold	Allentown	1830 Green St.
LaPointe, Lionel	New London, Conn.	1919 Arch St.

NAME.	RESIDENCE.	CITY ADDRESS.
Laux, Leo John	Sayre	2050 Cherry St.
Leary, Maurice Thomas	Ridgway	129 N. 16th St.
Levy, Abram	Philadelphia	1442 N. Franklin St.
Licnerski, J. H.	Erie	
Linker, K. R. E.	Philadelphia	2540 W. Silver St.
McCabe, Samuel Thomas	Defiance	110 N. 20th St.
McConnell, Whitman Carlisle	Erie	113 S. 40th St.
McDonnell, John W.	Sunbury	110 N. 20th St.
McGovern, Owen Joseph	Dunmore	115 Woodstock St.
Mann, John William	Ridley Park	
Mathis, Maurice S.	Leeds Point, N. J.	1740 Dover St.
Minerd, R. S.	Philadelphia	13th and Green Sts.
Muffley, G. Walter	Turbotville	113 N. Lambert St.
Nealon, Leo Aloysius		
A.B. (St. Johns)	Scranton	207 N. 20th St.
Nixon, J. W.		
A.B. (Utah)	Huntington, Utah	1801 Arch St.
Ornsteen, Abraham M.	Philadelphia	835 S. Alden St.
Ostrum, Herman W.	do.	108 W. Girard Ave.
Quinn, John, Jr.	Lansford	1529 Green St.
Redd, Wesley C.		
A.B. (Lincoln Univ.)	Sioux Falls, S. D.	712 N. 5th St.
*Ringstrom, Norman		
Rothrock, Donald M.	Lock Haven	1933 Arch St.
Scanlon, Leo Francis	Philadelphia	215 N. 20th St.
Seipel, Russell Cleveland	Easton	2141 N. 21st St.
Sharkey, John Anthony	Pittston	S. W. cor. 63d and Race Sts.
Sterner, Paul Franklin	South Bethlehem	218 W. Logan Sq.
Stout, Harry W.	Wenonah, N. J.	110 N. 20th St.
Szybkowski, Stanislaus	Nanticoke	3126 Richmond St.
Taylor, William Reid	New Washington, Ind.	535 S. 11th St.
Tompson, William LeRoy	Philadelphia	1633 N. 61st St.
Tomb, Everett Hale	Indiana	1706 Summer St.
Tretheway, Samuel Wesley	Parsons	1709 Race St.
Turville, William Henry Hart	Revere, Mass.	5318 Market St.
Wear, Roland F.	Hazelton	1830 Green St.
Weeder, S. Dana	Philadelphia	2143 N. 21st St.
Werle, Edgar J.	Meadville	1706 Summer St.
Wivell, Raymond Francis	Wilkes-Barre	153 N. 21st St.

THIRD-YEAR CLASS.

Allen, William Gee	Norcross, Minn.	1828 Mt. Vernon St.
Barenblatt, Henry	Russia	1625 Summer St.
Barraza, Santiago E.	Panama City, Panama	3611 Locust St.
Bast, Roy Bertrand	Schuylkill Haven	1607 Race St.
Benavides, Jaime		
B. S. and A. (Liceo de Heredia)	Heredia, Costa Rica	4207 Chestnut St.
Bitter, Arthur Henry		
A.B. (Missouri)	Quincy, Ill.	258 S. 38th St.
Blackstone, Basil Brown Gordon	Georgetown, Del.	Dorm. 32 Mask and Wig.
Bovard, Gilbert Simpson		
A.B. (Southern California)	Evanston, Ill.	3455 Walnut St.
Bowden, John M.	Brunswick, Ga.	2053 Bainbridge St.
Bragg, Henry Grove	Corning, N. Y.	3601 Locust St.
Branin, Howard S.	Millville, N. J.	3248 Sansom St.
Brokaw, Christopher Armitage	Elizabeth, N. J.	3940 Pine St.

NAME.	RESIDENCE.	CITY ADDRESS.
Brunson, Clyde Windan B.S. (Mississippi)	Pascayaulo, Miss.	3436 Walnut St.
*Byington, Le Grande Bremner	Iowa City, Iowa	
Carr, Alexander Moncrieff	West Grove	4059 Spruce St.
Christie, Ralph McDonald B.S. (Westminster)	Conoquenessing	Dorm. 40 Morris
Cook, Archibald Maclean	Renovo	3248 Sansom St.
Cooper, William Benjamin	Philadelphia	1732 Catharine St.
Corcoran, William Joseph	Old Forge	3445 Walnut St.
Creekmur, William Preston	Norfolk, Va.	3601 Locust St.
Davis, Oscar	Six Mile Run	3248 Sansom St.
De Caria, Francis	Monteleone, Italy	Dorm. 34 Provost Tower
Deweese, Ernest Joseph B.S. (Iowa)	West Branch, Iowa	4740 Hazel Ave.
Dickson, James G. B.S. (North Carolina)	Raeford, N. C.	129 S. 36th St.
Dies, John Livingood B.S. (Pennsylvania)	Memphis, Tenn.	Dorm. 11 Thomas Penn.
Downs, Frank Emmett B.S. (Wisconsin)	Hurley, Wis.	4048 Walnut St.
Eiman, John	Philadelphia	3707 Walnut St.
Ellis, Francis Duffy, Jr. A.B. (Pennsylvania)	do.	207 S. 42d St.
Ellis, Frank Alberson A.B. (Trinity College)	Trinity, N. C.	3601 Locust St.
Ellison, Richard Thomas B.S. (Pennsylvania)	Chestnut Hill	[8004 Lincoln Drive]
Ervin, Carl Edgar A.B. (North Carolina)	Troutmans, N. C.	3615 Locust St.
Farrell, Martin Joseph	Philadelphia	918 Belmont Ave.
Flores, Miguel Angel B. Humanidades (Liceo de Heredia)	Heredia, Costa Rica	3611 Locust St.
Focht, John Hill	Plantsville, Conn.	Dorm. 43 Memorial Tower
Ford, Ulric Stanley	Arlington, Wash.	1629 Vine St.
Foster, Louis Fernald Ph.B. (Lafayette)	Easton	3737 Locust St.
Gaither, Alfred Long A.B. (North Carolina)	Statesville, N. C.	3611 Locust St.
Gallagher, Russell	Philadelphia	1622 Wallace St.
Gilbert, James Arnold A.B. (Lincoln)	Pembroke, W. Bermuda	2053 Bainbridge St.
Gilkey, Dean	Berkeley, Cal.	3440 Walnut St.
Ginsburg, Louis B.S. (Pennsylvania)	Johnstown	Dorm. 452 N. Y. Alumni
Girardeau, Gladys	Savannah, Ga.	1314 S. 57th St.
Gonce, John Eugene, Jr. A.B. (Delaware)	Elkton, Md.	263 S. 38th St.
Gonzalez, Edward B. Humanidades (Liceo de Heredia)	Heredia, Costa Rica	203 De Kalb St.
Harrell, William Henry B.S. (North Carolina)	Williamston, N. C.	3611 Locust St.
Hartmann, Frederick Louis A.B. (Pennsylvania)	Atlantic City, N. J.	3707 Walnut St.
Hausheer, Walter Carl	Norwich, N. Y.	3440 Walnut St.

* Withdrawn.

NAME.	RESIDENCE.	CITY ADDRESS.
Heinrich, William Anthony B.S. (Wisconsin)	Cedarburg, Wis.	3707 Woodland Ave.
Henderson, Earl Fletcher B.S. (Grove City)	Sandy Lake	3703 Walnut St.
Hirst, John Cooke, 2d. A.B. (Pennsylvania)	Philadelphia	1821 Spruce St.
Hoehn, Frederic William	do.	124 S. 39th St.
Hoon, Merle Russell A.B. (Westminster)	Mercer	3429 Walnut St.
Hummel, Clarence David B.S. (Muhlenberg)	Nazareth	3248 Sansom St.
Imler, Harper George	Woodbury	3940 Pine St.
James, Bart Mulford	Ashley	3641 Locust St.
Joyce, Francis William	Pittsburgh	25 S. Van Pelt St.
Kalakas, Ramon C. A.B. (Santo Tomas, Manilla, P. I.)	Philadelphia	5438 Woodland Ave.
Karmarkar, Vishwas Ramual A.B. (Wilson College of U. F. C. S.)	Byculla, Bombay, India	3948 Pine St.
Katz, Simon	Philadelphia	1210 E. Moyamensing Ave.
Klein, Henry L.	Front Royal, Va.	3440 Walnut St.
Kluttz, DeWitt M.A. (Davidson)	Chester, S. C.	3605 Locust St.
Knowles, Daniel Lamont A.B. (North Carolina)	Mt. Olive, N. C.	3611 Locust St.
Kroger, William Paul	Butte, Mont.	3601 Locust St.
Light, Arthur Bomberger	Avon	212 S. 37th St.
Love, Albert Laning B.S. (Utah)	Provo, Utah	3801 Spruce St.
Lyon, Henry Wise A.B. (North Carolina)	Windsor, N. C.	3605 Locust St.
McFarland, Albert Rankin A.B. (Geneva)	Latrobe	238 S. 38th St.
McMaster, Philip Duryee B.S. (Princeton)	Philadelphia	2109 De Lancey St.
Mahmoud, Abdul Salam	Alexandria, Egypt	3940 Pine St.
Mallas, Maurice Louis	Philadelphia	230 S. 9th St.
Matthews, Vann Marshall A.B. (Washington and Lee)	Charlotte, N. C.	3609 Locust St.
Miller, Chauncey Dana B.S. (Pennsylvania State)	Scranton	3737 Locust St.
Miller, Hugh McCauley Ph.B. (Lafayette)	Philadelphia	4027 Powelton Ave.
Moore, Julian Alison B.S. (North Carolina)	Wilmington, N. C.	3611 Locust St.
Murphy, William Edward B.S. (Mississippi)	Gulfport, Miss.	3436 Walnut St.
Neely, William Kennedy, Jr.	Philadelphia	Dorm. 105 Leidy
Newbury, Horace Charles	Waukesha, Wis.	3707 Woodland Ave.
Nixon, James William	Gonzales, Tex.	3602 Walnut St.
Noble, Thomas Benjamin	Indianapolis, Ind.	3732 Locust St.
Oast, George Washington	Portsmouth, Va.	Dorm. 35 Morris
Openshaw, Jonathan Edward B.S. (Utah)	Salt Lake City, Utah	3422 Sansom St.
Orr, Theodore Ernest B.S. (Muhlenberg)	Phillipsburg, N. J.	1831 Spruce St.
Parisi, Anthony	Newark, N. J.	116 N. 17th St.
Peltz, Alberta A.B. (Wellesley)	West Orange, N. J.	4517 Kingsessing Ave.

NAME.	RESIDENCE.	CITY ADDRESS.
Pendergrass, Eugene Percival	Florence, S. C.	3615 Locust St.
Perry, Matthew White B.S. (Guilford)	Durant's Neck, N. C.	3440 Walnut St.
Peters, Warren John A.B. (Ursinus)	Slatington	do.
Philips, Rowland Stanton A.B. (Haverford)	Kennett Square	3539 Locust St.
Plant, James Stuart A.B. (Hamilton College) M.A. (Pennsylvania)	New Haven, Conn.	Pennsylvania Hospital, 4401 Market St.
Pontius, Solomon Gilmore Ph.B. (Franklin and Marshall)	Butler	3609 Locust St.
de la Puente, Carlos Alcibiades B.S. (San Marcos)	Lima, Peru	749 Corinthian Ave.
Purdy, James Edwin A.B. (Geneva)	Beaver	238 S. 38th St.
Ravdin, Isidor Schwaer B.S. (Indiana)	Evansville, Ind.	3719 Spruce St.
Raymond, Malcolm	Philadelphia	[15 Windermere Ave., Lansdowne]
Reed, Josiah Frederic A.B. (Lebanon Valley)	Lebanon	224 S. 38th St.
Reed, Oliver Kane B.S. (Gettysburg)	Philadelphia	224 N. Wilton St.
Reich, Abraham Louis	Newark, N. J.	3940 Pine St.
Replogle, Joseph Parsons	Johnstown	Dorm. 105 Leidy
Reyner, Daniel B.S. (North Carolina)	Philadelphia	5031 Baltimore Ave.
Rice, Earl Roland A.B. (Grinnell College)	Ames, Iowa	3718 Locust St.
Rice, George Ernest A.B. (Furman)	Belton, S. C.	527 S. 41st St.
Rine, Sedic S.	Port Treverton	5947 Walton Ave.
Ritzman, Ralph Roscoe A.B. (Wisconsin)	Orangeville, Ill.	3715 Woodland Ave.
Rosenberg, Milton, M.	Scranton	Dorm. 22 Coxe
Schmidt, Carl Frederic A.B. (Lebanon Valley)	Lebanon	222 S. 38th St.
Scott, Samuel Floyd A.B. (North Carolina)	Mebane, N. C.	3615 Locust St.
Shafer, Alexander	Hartford, Conn.	1041 S. 5th St.
Shoemaker, Paul Colver	Allentown	3601 Locust St.
Smith, Claiborne Thweatt A.B. (North Carolina)	Scotland Neck, N. C.	3611 Locust St.
Smith, David Emmanuel A.B. (Utah)	Victor, Idaho.	3801 Spruce St.
Smith, Edward Kearney	Reading	3940 Pine St.
Smith, Hugh Percival A.B. (Wake Forest)	Timmons ville, S. C.	3615 Locust St.
Smith, J. Howard A.B. (Lafayette)	Berwick	3440 Walnut St.
Smyth, Calvin Mason, Jr.	Germantown	3641 Locust St.
Spickard, Vernon Warren	Des Moines, Iowa	4835 Baltimore Ave.
Sprunt, William Hutchinson, Jr. B.S. (Davidson)	Wilmington, N. C.	Dorm. 17 Thomas Penn
Stark, Walter John B.S. (Pennsylvania)	Dover, N. J.	3340 Walnut St.
Steele, Marshall Kemble A.B. (Pennsylvania)	Philadelphia	4241 Regent St.

NAME.	RESIDENCE.	CITY ADDRESS.
Stewart, Steele Fuller B.S. (Westminster)	Claremont, Cal.	3420 Race St.
Stokes, Samuel Emlen A.B. (Haverford)	Moorestown, N. J.	3539 Locust St.
Stulz, Alvin Dey A.B. (Western Maryland)	Bridgeton, N. J.	3940 Pine St.
Taine, Louis Nathaniel	Philadelphia	731 Master St.
Thoennebe, Carl Leonard	do.	23 N. 38th St.
Trimmer, Clifford Sharp Ph.B. (Lafayette)	German Valley, N. J.	222 S. 38th St.
Vincent, Ubert Conrad A.B. (Shaw)	Raleigh, N. C.	3414 Ludlow St.
Vogt, Paul Melanchthon A.B. (Lebanon Valley)	Prescott	Dorm. 33 Provost Tower
Voorhees, Lamar Shepard	Newton, N. J.	3440 Walnut St.
Wadsworth, James Ernest	Philadelphia	3445 Jasper St.
Wallace, Irving Francis	Syracuse, N. Y.	2261 N. 13th St.
Wenner, Thomas Jefferson	Wilkes-Barre	2038 Cherry St.
White, Herman Chester	Dallas	Dorm. 40 Morris
Wilson, James Sharp, Jr.	Beaver	3703 Walnut St.
Wood, Jonathan Knight Williams	Odessa, Del.	Dorm. 53 Provost Tower

SECOND YEAR CLASS.

Adler, Francis Heed A.B. (Pennsylvania)	Philadelphia	Belgravia 18th and Chestnut Sts.
Bachman, Rowland Wilson	Allentown	3703 Walnut St.
Balch, Ensign Christopher	Greenwich, N. Y.	3329 Walnut St.
Barrett, Ralph Lester B.S. (Bowdoin)	East Sumner, Me.	Cerne, Schoolhouse Lane, Germantown
Bausch, Elmer Henry	Lynnville	3703 Walnut St.
Beideman, Joseph Ellsworth	Norristown	3440 Walnut St.
Bell, Ralph Emerson B.S. (Bucknell)	Munhall	Dorm. 40 Mask and Wig.
Berge, James Hallard B.S. (Washington)	Davenport, Wash.	3601 Locust St.
Besser, Joseph Philip	Philadelphia	3913 Poplar St.
Boaz, Emmett Daniel, 2d.	Covesville, Va.	3703 Walnut St.
Bogran, Roman	Pto. Cortes, Honduras	3236 Chestnut St.
Boucher, Samuel Doid Ph.B. (Grove City)	Clymer	222 S. 38th St.
Broadwell, Stuart, Jr.	Springfield, Ill.	3601 Locust St.
Brobeck, Von Haller	Hoopeston, Ill.	222 S. 38th St.
Burden, Verne Gerard	St. Marys	Dorm. 410 Leidy
Burrow, James B.S. (Kings College)	Bristol, Tenn.	3705 Chestnut St.
Campbell, Edward Hastings	Warren	1220 S. 45th St.
Carr, Joseph Aloysius	Olyphant	223 S. 36th St.
Clark, Roscoe Loyal B.S. (Whitman)	Dayton, Wash.	3607 Sansom St.
Colon, Rafael	Arecibo, Porto Rico	3711 Woodland Ave.
Cook, William Bell A.B. (Washington)	Seattle, Wash.	3601 Locust St.
Copeland, Clarence Allen B.S. (Allegheny)	Meadville	1421 S. Paxon St.
Coulter, Harry Gladstone B.S. (Westminster)	New Wilmington	3429 Walnut St.

NAME.	RESIDENCE.	CITY ADDRESS.
Darmstadter, Herbert Joseph	Philadelphia	3837 N. 19th St.
Denney, John DeWitt A.B. (Cornell)	Columbia	3601 Locust St.
Dorewitz, Maurice	Red Bank, N. J.	Dorm. 434 Class '87
Eaton, Francis Henry	Wellsboro	Dorm. 337 Foerderer
Ford, Elizabeth Woolston A.B. (Wellsley)	Moorestown, N. J.	[290 Main St.]
Gilmour, William Rodger A.B. (Princeton)	Philadelphia	4511 Osage Ave.
Grant, Francis Clark A.B. (Harvard)	do.	3637 Locust St.
Hamilton, Aubrey Horace	New York City	5504 Baltimore Ave.
Hamilton, Edwin Gail	Warren	3604 Walnut St.
Harden, Graham A.B. (North Carolina)	Burlington, N. C.	3440 Walnut St.
Hare, Francis Alfred A.B. (Washington and Jefferson)	Wheeling, W. Va.	3440 Walnut St.
Heck, Alfred Leon	Wilmington, Del.	3703 Walnut St.
Herrman, Clinton Simon	Philadelphia	3703 Old York Road
Houck, Willis Alfred	Clymer	906 Duncannon Ave.
Hudson, Ellis Herndon A.B. (Jas. Millikin Univ.)	Brekmoor, Decatur, Ill.	3403 Hamilton St.
Johnston, Charles Louis A.B. (North Carolina)	Whittle Springs, Knox- ville, Tenn.	3615 Locust St.
Johnston, Florence D. B.S. (Coe College)	Cedar Rapids, Iowa	Dorm. Sergeant Hall
Jones, Alden Bliss A.B. (Swarthmore)	Swarthmore	3440 Walnut St.
Kazmann, Harold Aaron	Long Branch, N. J.	3607 Locust St.
Kerper, Edward Pelham	Harrisburg	230 S. 38th St.
Kershner, Ammon George B.S. (Ursinus)	Norristown	3440 Walnut St.
King, Merrill Jenks	Whitewater, Wis.	102 S. 36th St.
Klein, Robert Jacob	Springfield, Mass.	Dorm. 427 Baldwin
*Knight, Albert Preston	Pottsville	Dorm. 36 Rodney
Kridel, Louis Martin	Pittsburgh	3615 Locust St.
Law, Don Geate B.S. (Washington)	Seattle, Wash.	3609 Locust St.
Li, Kuang Hsun	Soochow, China	do.
Lindsay, Donald Edward	Pittsburgh	3914 Spruce St.
McCarthy, Arthur M.	Blossburg	Dorm. 337 Foerderer
McNutt, Edwin Roland	Vandergrift	3728 Walnut St.
Malvar, Marciano M.	Sta. Tomas, Batangas, Philippine Islands	3261 Sansom St.
Masters, Harry A.B. (Grove City)	Centerville	3703 Woodland Ave.
Metcalf, Malcolm McNaughton B.S. (Allegheny)	Jamestown, N. Y.	Dorm. 427 Baldwin
Musgrave, John Knox B.S. (Pennsylvania State)	Pittsburgh	119 S. 37th St.
Nast, Jerome	Cerry	Dorm. 20 Morgan
Noble, John William	Allentown	3719 Spruce St.
Orenstein, Archie	Wilmington, Del.	3709 Chestnut St.
Parsons, Louis Smith	Parsonsburg, Md.	Dorm. 443 Hopkinson
Pfeiffer, Henry March	Cedar Falls, Iowa	3455 Walnut St.
Reilly, James Joseph B.A. (Holy Cross)	Scranton	Dorm. 423 McKean

* Withdrawn. On leave of absence.

NAME.	RESIDENCE.	CITY ADDRESS.
Rider, Evelyn Amanda	Ellicott City, Md.	120 S. 34th St.
Ryan, Thomas Joseph	Gilberton	3728 Walnut St.
Schmoele, John Moore	Portsmouth, Va.	3601 Locust St.
Scott, John Porter	Philadelphia	5946 Woodbine Ave.
Smith Edward Marcus B.S. (Va. Military Institute)	Valdasta, Ga.	3703 Walnut St.
Stecher, Hilmar Armin	Philadelphia	3728 Walnut St.
Taylor, Herbert William A.B. (Haverford)	Malvern	Llamar Apartments, 46th and Walnut Sts.
Taylor, John Goodwin A.B. (Swarthmore)	Chester	[2108 W. 3d St.]
Taylor, Kempton Potter Aiken B.S. (Haverford)	Chestnut Hill	Dorm. 386 Lippincott
Taylor, Samuel Paul A.B. (Lehigh)	Altoona	Dorm. 40 Mask and Wig
Thorington, James Monroe B.S. (Princeton)	Philadelphia	2031 Chestnut St.
Upham, Charles	Bayonne, N. J.	Dorm. 25 Coxe
Wagoner, George W., Jr.	Johnstown	3641 Locust St.
Waygood, James Jamison Ph.B. (Lafayette)	Glenside	3701 Walnut St.

**FORMER MEDICO-CHIRURGICAL STUDENTS NOW BEING TAUGHT
AT SEVENTEENTH AND CHERRY STREETS.**

Abrams, Wilmer D.	Ebensburg	1713 Summer St.
*Ballard, Charles McE. B.Litt. (Kenyon)	Philadelphia	2217 S. Broad St.
Blackburn, Walter J.	Stahlstown	1715 Summer St.
Bobb, Arthur A.	Herndon	139 N. 20th St.
Bobb, Clarence C.	do.	do.
Bogaev, Harry	Philadelphia	742 McKean St.
Bottomley, Harold	Roanoke, Va.	1712 Wallace St.
Burros, Albert A.	Scranton	3940 Pine St.
Comfort, John B.	Trenton, N. J.	
Daghir, N. M. A.	Philadelphia	1172 S. 10th St.
*Domine, Anthony	Brooklyn, N. Y.	1620 Green St.
*Fegley, Harry G.	Orwigsburg	
*Fisher, J. K.	Sunbury	
Flotte, Camille J.	Colwyn	[405 Colwyn Ave.]
Getty, Lawrence	Indiana	1715 Summer St.
Grala, William I.	Hazleton	237 N. 18th St.
Greenwald, J. J.	Philadelphia	1223 Snyder Ave.
Hahn, Myron, J., Jr.	Rockland, Me.	1832 Race St.
Harris, Benjamin H.	Philadelphia	2232 S. 11th St.
Hawthorne, H.	do.	1906 Mt. Vernon St.
Hoffman, LaRue M.	Danville	1521 N. 29th St.
*Hogan, C. V.	Pottsville	
Irwin, James R.	Belleville, N. J.	1706 Summer St.
Jaso, James	Newark, N. J.	116 N. 17th St.
Jerrick, W. T.	Philadelphia	
Kassabian, L. C.	Armenia	1323 Brandywine St.
Kile, Robert F.	Canton, Kan.	1832 Race St.
Kohlbraker, George	Shamokin	212 N. 19th St.
*Kownacki, Francis J.	Philadelphia	
Leff, Benjamin	do.	721 South St.

*Withdrawn.

NAME.	RESIDENCE.	CITY ADDRESS.
Loewen, R. K.	Tamaqua	237 N. 18th St.
McNelis, Joseph A.	Hazleton	153 N. 21st St.
MacDougall, Lorne	Scranton	808 N. 63d St.
Mann, Arthur A. A.B. (Swarthmore)	Philadelphia	1234 Spring Garden St.
*Miller, J. E.	Scranton	
Mittleman, Harry M.	Old Forge	137 N. 19th St.
Newcomer, Ernest	Uniontown	203 Linden Apartment, 13th and Green Sts.
Newhart, Carl	Cherryville	153 N. 21st St.
Nowicki, Z.	Scranton	1620 Green St.
Pierson, C. L.	Netcong, N. J.	1521 N. 29th St.
Ruloff, Clarence F.	Nazareth	2038 Cherry St.
Sausser, I. E.	Hegine	139 N. 20th St.
Sawyer, Samuel D.D.S. (Pennsylvania)	Philadelphia	2038 Cherry St.
Schafenacker, Albert	North Wales	
Schlier, Earle B.	Hazleton	212 N. 17th St.
Sill, John B.	Philadelphia	1521 N. 29th St.
Schultz, Charles H.	Johnstown	1713 Summer St.
Steffin, Michael A.	Philadelphia	617 S. 10th St.
Stewart, Alexander	Shippensburg	112 N. 18th St.
Trapold, A. C.	Wilkes-Barre	3305 Powelton Ave.
Tuberty, Harold M.	Sayre	1619 Summer St.
Verdugo, Justo	Philadelphia	1136 Pine St.
Voegelin, A. W.	do.	604 W. Lehigh Ave.
Weiskrantz, Benjamin	do.	2337 N. 30th St.
Wilder, Charles B.S. (Dartmouth)	Washington, D. C.	37 Saunders Ave.

FIRST-YEAR CLASS.

Armstrong, William Jefferson A.B. (Allegheny)	Kane	Dorm. 423 McKean
Bahnmler, Edwin Conrad	Wilkes-Barre	263 S. 38th St.
Barber, Wilford	Centerville, Utah	3414 Sansom St.
Barchfeld, Charles Custer B.S. (Franklin and Marshall)	Somerset	218 S. 37th St.
Barnhart, Arthur David	Scottdale	3331 Walnut St.
Bartecchi, Ferdinand Aloysius	Scranton	3445 Walnut St.
*Bilinski, Basil	Philadelphia	2236 Orthodox St.
Beardwood, Joseph Thomas, Jr.	Elkins Park	[Park Ave.]
Behrens, Charles Frederick	Philadelphia	1934 Morris St.
Blumenthal, Isabel J.	New York City	4019 Locust St.
Bower, Wallace B. Litt. (Princeton)	Scranton	Dorm. 250 Carruth
Breuning, Paul Harold	Tacoma, Wash.	102 S. 36th St.
Brinton, Samuel Jervis	Center Square	
Brown, Ambrose McChesney A.B. (Washington and Lee)	Buena Vista, Va.	3710 Spruce St.
Brown, John Carlisle	Vincentown, N. J.	Dorm. 365 Baird
Brown, Rolla Oscar	Pittsburgh	3409 Chestnut St.
Burrows, James Henry	Williamsport	3615 Locust St.
Butler, James William B.S. (Fordham)	Wilmington, Del.	[618 W. 18th St.]
Campbell, Leslie Harland	Utica, N. Y.	3605 Sansom St.
Campion, Richard Joseph	Overbrook	6381 Woodbine Ave.
Cannon, John Francis Xavier	Philadelphia	1246 N. Front St.

* Withdrawn.

NAME.	RESIDENCE.	CITY ADDRESS.
Catlin, William Granville A.B. (St. John's)	White Haven, Md.	4024 Spruce St.
Cheney, William Clem	Farmington, Utah	3414 Sansom St.
Clark, Robert Nesbitt A.B. (Lafayette)	Wilkes-Barre	3731 Sansom St.
Coston, Laila Ann A.B. (Adelphi)	Scranton	The Bartram, 33d and Chestnut Sts.
*Cross, Harry C. A.B. (Princeton)	Philadelphia	2446 N. 31st St.
Davenport, Samuel Marshall Sc.B. (Bucknell)	Plymouth	3719 Locust St.
*Davidson, John George A.B. (Muhlenberg)	Coopersburg	3423 Walnut St.
* Withdrawn.		
Dennisson, Josephine House A.B. (Swarthmore)	West Chester	[312 W. Miner St.]
DeWalt, Horace Edward	Sioux City, Iowa	3807 Spruce St.
Dodd, William Earle	Martinsburg, W. Va.	3609 Locust St.
Ellis, Alexander	Camden, N. J.	[502 Berkley St.]
Esler, James Wallace A.B. (Washington and Jefferson)	Tarentum	3440 Walnut St.
Fager, Charles Buffington	Harrisburg	Dorm. 25 E. F. Smith
Finkelstein, Murray	Olyphant	3709 Chestnut St.
Fiske, Seymour A.B. (Wisconsin)	Philadelphia	3403 Hamilton St.
Floyd, John Smith	Butte, Mont.	Dorm. 33 Cleeman
Foshay, Lee	Montclair, N. J.	3604 Walnut St.
Freda, Leonard Aloysius	Dunmore	3445 Walnut St.
Freed, Cecil Forest	Parkersburg, W. Va.	16 S. 37th St.
Freeman, Walter Jackson, Jr. A.B. (Yale)	Philadelphia	1832 Spruce St.
Gabriel, Albert Heinrich	Montclair, N. J.	Dorm. 38 Morris
Gardner, Leon Lloyd A.B. (Pomona)	Claremont, Cal.	4401 Market St.
Glover, Lawrence Litchfield A.B. (Princeton)	Haddonfield, N. J.	[232 K. H. E.]
Golden, Benjamin Ira A.B. (Tufts)	Elkins, W. Va.	3404 Powelton Ave.
Goldthwaite, Harman Reasoner B.S. (Lafayette)	Marion, Ind.	3731 Locust St.
Grebe, Louis Frederick	Stony Creek Mills	3737 Spruce St.
Greenleaf, Arthur Johnson	Quarryville	206 S. 37th St.
Hall, Perry Oliver	Ridgway	3413 Walnut St.
Harberg, Sidney	Philadelphia	3720 N. 19th St.
Harvey, John, Jr.	Snow Hill, N. C.	3609 Locust St.
Hayes, Frank Caldwell	Erie	3719 Locust St.
Hazen, John Wallace	Hartstown	3331 Walnut St.
*Heckel, Frank Price	Philadelphia	200 S. 42d St.
Heiken, Charles Anthony A.B. (Villanova)	Pottsville	202 S. 37th St.
Hiwale, Govind Sakharam	Byculla, Bombay, India	4224 Baltimore Ave.
Houlihan, Carl Thomas	Scranton	223 S. 36th St.
Jaffe, Maurice	Philadelphia	3847 Poplar St.
*Jeanmard, Lucien Albin A.B. (Jefferson College)	Lafayette, La.	3729 Spruce St.
Jones, Mabel Bessie	Philadelphia	1314 S. 18th St.

* Withdrawn.

NAME.	RESIDENCE.	CITY ADDRESS.
Kaplan, Samuel	Philadelphia	1408 Germantown Ave.
King, Arthur H. B.S. (Waynesburg)	Waynesburg	3723 Locust St.
Klemme, Roland Metzler	Belleville, Ill.	3705 Chestnut St.
Knapp, Joseph Scott A.B. (Grove City)	Fredonia	206 S. 37th St.
Knight, Francis Patrick	Scranton	3403 Walnut St.
Kressler, Kenneth Wolfinger Ph.B. (Lafayette)	Easton	3731 Locust St.
*Lavender, Herman Leon	Cincinnati, Ohio	3810 Locust St.
Lerch, Claude Brinser	Highspire	3731 Locust St.
Lindsey, Walter Hirst A.B. (Westminster)	Mercer	3429 Walnut St.
Locke, LeRoy Dyer B.S. (Pennsylvania State)	Bellefonte	212 S. 37th St.
McDonald, Lester Lane B.S. (Whitman)	Walla Walla, Wash.	3607 Sansom St.
Mason, Milton Percy A.B. (Guilford)	New York City	3708 Walnut St.
Merkle, Ralph Francis B.S. (Muhlenberg)	Allentown	Dorm. 37 Morris
Milliken, Howard Elliott	Harrisburg	3425 Walnut St.
Mills, William	Arapahoe, Neb.	3459 Chestnut St.
Morgan, Julia A.B. (Dickinson)	Carlisle	120 S. 34th St.
Morris, Edward Heydecker	Philadelphia	3539 Locust St.
Mortimer, Earle Lincoln	Williamsport	3323 Walnut St.
Nast, Max Schaul B.S. (Pennsylvania)	Butler	Dorm. 33 Bishop White
Nelson, Moses Russell	Bryn Mawr	[20 Prospect Ave.]
Oast, Thomas Edgar	Portsmouth, Va.	Dorm. 44 Cleeman
Pangburn, Edward Weddell B.S. (Bucknell)	Elizabeth	3605 Sansom St.
Petry, Howard Kistler A.B. (Wesleyan)	Wilkes-Barre	3455 Walnut St.
Rapoport, Frank M.	Philadelphia	732 S. 3d St.
Renie, Robert Oswald	Arapahoe, Neb.	3459 Chestnut St.
Riegel, Donald	Philadelphia	5409 Vine St.
*Roberts, Paul Ramsey	do.	3617 Locust St.
Rowan, Henry Madison A.B. (Washington and Lee)	Greenville, Va.	4426 Pine St.
Royall, George Claiborne, Jr. A.B. (North Carolina)	Goldsboro, N. C.	3609 Locust St.
Sabel, Meyer	Philadelphia	7034 Woodland Ave.
Sabol, John Gregory	McKeesport	222 S. 38th St.
Schatz, Charles Howard	Philadelphia	2838 Richmond St.
Schofield, Frederick Sewall A.B. (Pennsylvania)	do.	1517 Oxford St.
Semans, Thomas Breckenridge B.S. (Guilford)	Uniontown	3708 Walnut St.
Shenberger, Jacob Francis A.B. (Lebanon Valley)	Dallastown	222 S. 38th St.
*Shewell, William I.	Germantown	417 W. Cheltenham Ave.
Smith, Vincent Joseph	New Britain, Conn.	3731 Locust St.
Sparrow, Thomas De Lamar B.S. (Davidson)	Washington, N. C.	Dorm. 225 Baldwin

* Withdrawn.

NAME.	RESIDENCE.	CITY ADDRESS.
Spear, Willard Henry	Cleveland, Ohio	3937 Pine St.
Starr, Isaac, Jr.		
B.S. (Princeton)	Chestnut Hill	Stenton Ave.
Stitt, Hugh Iseman		
A.B. (Gettysburg)	Ford City	3717 Locust St.
Stokes, Joseph, Jr.		
A.B. (Haverford)	Moorestown, N. J.	
Stone, Russell Bennett		
Ph.B. (Lafayette)	Easton	3731 Locust St.
Swan, Theodore Strong		
B.S. (Geneva)	New Brighton	3807 Spruce St.
Sweeney, Joseph Russell	Tamaqua	3718 Walnut St.
Thompson, Hugh Graves		
A.B. (Hampden Sidney)	Charleston, W. Va.	3615 Locust St.
Tucker, Francis Henry		
A.B. (Southwestern Univ.)	Nacogdoches, Tex.	102 S. 36th St.
Tuff, Louis	Philadelphia	2534 S. 8th St.
Turner, Frank Arthur	Washington, D. C.	1333 S. 19th St.
Urba, Edward Francis	Waterbury, Conn.	222 S. 38th St.
Veasey, C. A., Jr.	Spokane, Wash.	Dorm. 330 Franklin
*Wainer, Jacob Morris	Philadelphia	
Ward, Vernon Leroy	Willard, Utah	3801 Spruce St.
Waxman, Harold Emanuel	Pittsburgh	Dorm. 14 Graduate
Wyant, Richard Philipp	McKeesport	Dorm. 44 Bishop White
Yao, Erh-Chang	Shanghai, China	232 S. 38th St.
Ziemer, Harry S.		
B.S. (Muhlenberg)	Adamstown	3934 Pine St.
Zubieta, Ernest	Panama	3729 Spruce St.

**FORMER MEDICO-CHIRURGICAL STUDENTS NOW BEING TAUGHT
AT SEVENTEENTH AND CHERRY STREETS.**

*Barsby, John E.	Nesquehoning	
Biro, Louis P.	Newark, N. J.	44 N. 16th St.
Bishop, Winfield	Baltimore, Md.	1913 Fitzwater St.
Brennan, Thomas C.	Shenandoah	1802 Spring Garden St.
Colon, Luis T.	Mayaguez, Porto Rico	122 N. 17th St.
Cotner, Jacob	Sunbury	118 N. 19th St.
Cress, William	Girardville	1503 Cayuga St.
Del Duca, Vincent	Camden, N. J.	[939 S. 4th St.]
Delle, B. Stewart	York New Salem	1806 S. Logan Sq.
Dunkelberger, LeRoy	Kutztown	2025 Arch St.
*Dwyer, John M.	Renovo	
Ekman, James B.	Philadelphia	5138 Chestnut St.
Elliott, John J.	Pottsville	1924 Race St.
Enfield, Thomas W.	Bedford	1713 Summer St.
Fabiani, Joseph U.	Philadelphia	N. E. cor. 10th and Chris- tian Sts.
Fisher, P. C.	Allendale, N. J.	218 W. Logan Sq.
Gold, Michael J.	Philadelphia	2534 N. 3d St.
Greenburg, Henry	do.	222 Green St.
Hudock, John	Mt. Carmel	3127 N. 26th St.
Hurley, Burt	Elizabeth, N. J.	1806 Race St.
Jaquish, Charles J.	Mansfield	159 N. 21st St.
Kennedy, Andrew A.	Philadelphia	1924 Race St.
Knauer, C. Hull, Jr.	Milton	1806 S. Logan Sq.
Koehler, Julius E.	Philadelphia	5409 Frankford Ave.

* Withdrawn.

NAME.	RESIDENCE.	CITY ADDRESS.
Kosker, John J.	Nanticoke	2035 Arch St.
McCabel, James J.	Shenandoah	1924 Race St.
McGinley, Edward	Wilkes-Barre	129 N. 16th St.
Pettit, William A.	Salt Lake City, Utah	930 N. Sartain St.
Peterson, Ralph E.	Philipsburg	1806 S. Logan Sq.
Seth, John A.	Philadelphia	1924 Race St.
Sherwood, William	Hartford, Conn.	118 N. 19th St.
Smith, William	Philadelphia	1333 Frankford Ave.
*Spangler, C. V.	Northampton	
Sunder, Joseph	Jeannette	1924 Race St.
*Trygar, Francis	Philadelphia	
Veneroso, Frank	Hazleton	153 N. 21st St.
Wienert, Arthur	Philadelphia	2540 N. 32d St.
Whelen, George	Scranton	1106 S. 46th St.
King, George	Savannah, Ga.	1719 N. Alder St.

SPECIAL STUDENTS.

Faber, Erwin F.	Philadelphia	4522 Chestnut St.
Fernandes, R.		
M.D. (Mercedes Hospital)	Havana, Cuba	Dorm. Sergeant, 120 S. 34th St.
Kennicott, Robert H.		
A.B. (Minnesota)	Los Angeles, Cal.	3434 Walnut St.
*Molzahn, A. J.		
B.S. (Fremont College)		
M.D. (George Washington Univ.)	Hay Springs, Neb.	9537 Banes St.
Tibbets, E. Stehley	Keyser, W. Va.	3723 Spruce St.
Van Meter, Elfrida V.	Denver, Col.	6 S. Farragut St.

COURSES IN PUBLIC HYGIENE.

Bredeck, Joseph Francis		
A.B. (Christian Bros. Col.)		
M.D. (Washington Univ.)	St. Louis, Mo.	Phipps Institute.
Hsieh, En-Tseng		
M.D. (Union Med. College, Pekin, China)		
C.P.H. (Harvard Univ.)	Pekin, China	3913 Woodland Ave.
Tracy, Martha		
A.B. (Bryn Mawr)		
M.D. (Women's Medical Col.)	Philadelphia	5138 Wayne Avenue

CERTIFIED SANITARIAN.

Price, Martha Blanchard		
A.B. (Wellesley)	Philadelphia	307 W. School Lane

* Withdrawn.

SUMMARY.

Graduate Students.....	10
Students of the Fourth-Year Class.....	73
Students of the Fourth-Year Class attending at Seventeenth and Cherry Sts.....	91
Students of the Third-Year Class.....	133
Students of the Second-Year Class.....	77
Students of the Second-Year Class, attending at Seventeenth and Cherry Sts.....	55
Students of the First-Year Class.....	118
Students of the First-Year Class, attending at Seventeenth and Cherry Sts.....	39
Special Students.....	6
Courses in Public Hygiene.....	3
Certified Sanatarians.....	1
Total.....	<hr/> 606

MEDICAL CALENDAR FOR 1917-1918.

1917.

- July 2, Monday.....Applications for Admission should be
presented on or before this date.
- July 16, Monday.....Notifications of acceptance or non-
acceptance for Enrollment sent out.
- Sept. 24, Monday.....Competitive Examinations for Medical
Scholarships begin: 10 A. M.
- Sept. 24, Monday.....Examinations for Admission to Advanced
Standing begin: 2 P. M.
- Sept. 24, Monday.....Re-Examinations begin: 2 P. M.
- Sept. 28, Friday.....Session begins.
- Nov. 28, Wednesday.....Thanksgiving Recess begins: 6 P. M.
- Dec. 3, Monday.....Thanksgiving Recess ends: 9 A. M.
- Dec. 22, Saturday.....Christmas Recess begins: 1 P. M.

1918.

- Jan. 3, Thursday.....Christmas Recess ends: 9 A. M.
- Jan. 28, Monday.....Mid-Year Examinations begin: 9 A. M.
- Feb. 22, Friday.....University Day: Recess.
- Mar. 28, Thursday.....Easter Recess begins: 6 P. M.
- April 2, Tuesday.....Easter Recess ends: 9 A. M.
- May 1, Wednesday.....Last day for receipt of Prize Essays and
Reports.
- May 27, Monday.....Final Examinations, Fourth-Year Class,
begin.
- June 3, Monday.....Final Examinations, other Classes, begin.
- June 19, Wednesday.....Commencement.



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